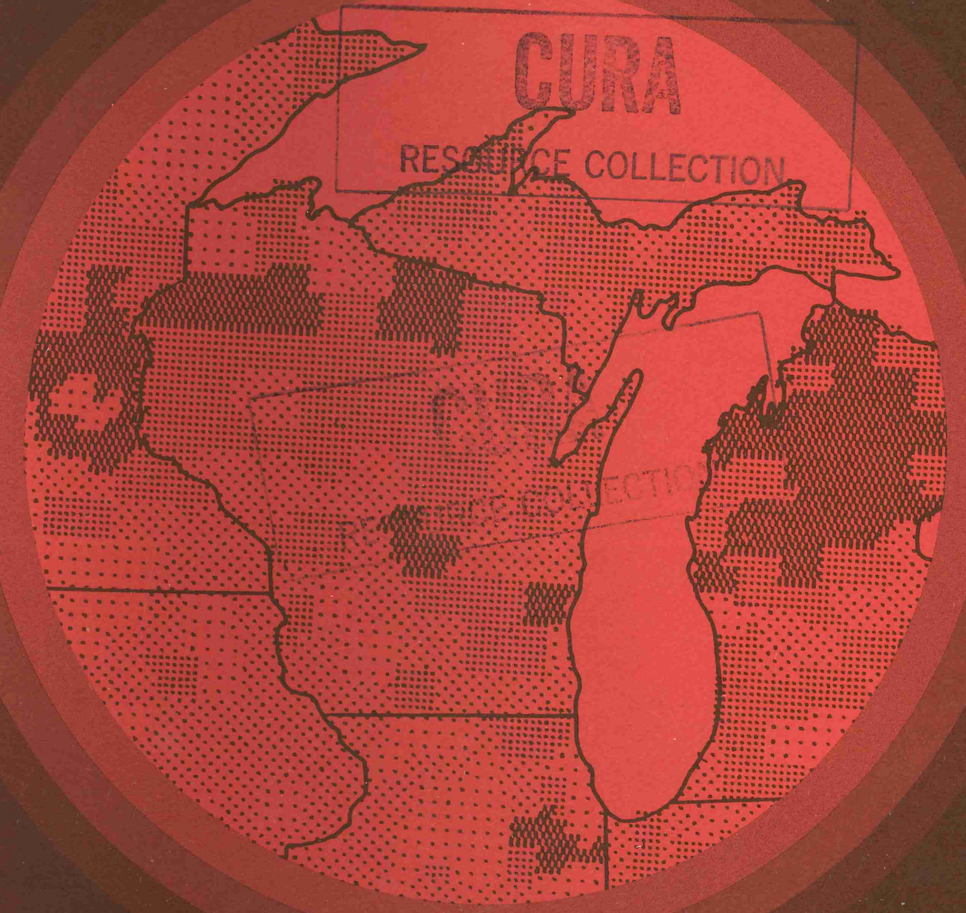
Recent Population Change in the United States

a series of maps

David J. Borchert
and
James D. Fitzsimmons



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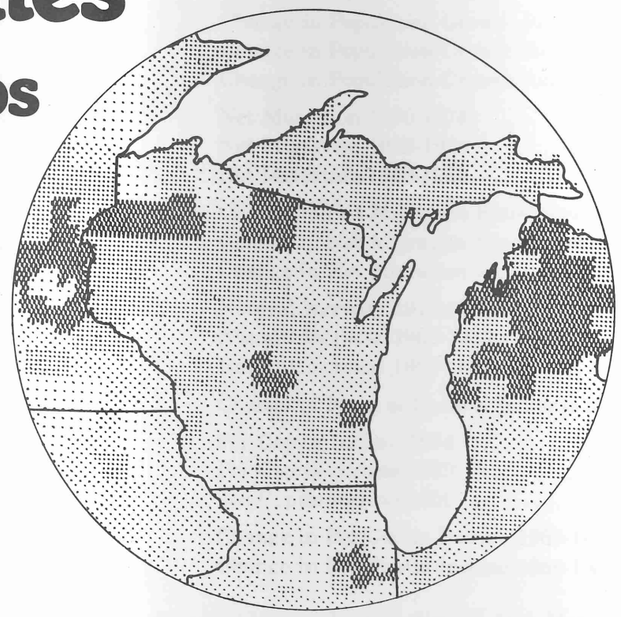

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University of Minnesota

ACKNOWLEDGMENTS

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INTRODUCTION

RECENT POPULATION REDISTRIBUTION

For most of American history people have gravitated toward large urban centers, but currently an opposite trend seems underway. In the first half of the 1970s, while the nation experienced record-low birth rates, nearly 80 percent of nonmetropolitan counties gained population, compared to the 40 percent that gained during the high birth rate 1950s.[1,2] Even some of the most remote nonmetropolitan areas, after witnessing decades of population losses, began to gain population in the late 1960s and the 1970s. Also in the first half of the 1970s, forty Standard Metropolitan Statistical Areas (SMSAs)—about 15 percent of them—lost population.[3] There were few losing SMSAs in previous years, and their growing number in the 1970s reflected the combination of low birth rates and the net outmigration experienced by nearly 45 percent of all SMSAs between 1970 and 1975

Those SMSAs losing population were of all sizes: small ones such as Sherman-Denison and Pine Bluff as well as larger areas like Jersey City, Dayton, and Utica-Rome. The nation's largest SMSAs, however, experienced a disproportionate share of the population losses. Pittsburgh was the only large SMSA to lose population in the 1960s, but in the first half of the 1970s the nine SMSAs with 1970 populations over 2.5 million, viewed as a group, lost population. Estimates show that New York, the largest SMSA, lost over 4 percent of its population between 1970 and 1975. Los Angeles, Philadelphia, and Detroit were other losers among the largest metropolitan areas, and Chicago gained less than 1 percent in the same five years. Among SMSAs with populations between 1.0 and 2.5 million, Cleveland, Pittsburgh (again), Newark, St. Louis, Buffalo, Seattle-Everett, and Cincinnati lost in the 1970s.

The losses experienced in recent years by some SMSAs were negligible, as were the gains by others. More important than whether SMSAs actually gained or lost population was their departure from past high metropolitan growth rates. To be sure there were still fast-gaining SMSAs just as there were metropolitan areas that gained slowly or a few that lost population in the years of rapid population growth. A large share of the recent fast-gainers were in Florida, the Southwest, and the West. In fact, six of the fifteen fastest growing SMSAs in the first half of the 1970s were in the state of Florida: Ft. Myers, Ft. Lauderdale-Hollywood, Sarasota, West Palm Beach-Boca Raton, Orlando, and Tampa-St. Petersburg all added well over 20 percent to their populations in only five years. Ft. Myers, the nation's fastest growing SMSA, increased its population by nearly one-half, and Tampa-St. Petersburg was the only SMSA with a 1970 population of greater than one million to grow by more than 20 percent in the next five years. Texas accounted for four more of the fifteen fastest growing metropolises and Arizona two, so that three states with well known environmental amenities accounted for twelve of the fifteen fastest growing SMSAs in the nation. Other states with fast-gaining SMSAs in the first half of the 1970s were Alaska, Arkansas, California, Idaho, Nevada, and Utah. The national population's gradual movement to the West and South is certainly evident in this pattern of metropolitan growth.

More surprising than the general slowdown in metropolitan growth was the new growth in several long-declining nonmetropolitan parts of the country. Nonmetropolitan America gained population at the expense of metropolitan areas during the period 1970-1975, with the result that it grew by nearly 7 percent while the metropolitan part of the nation added only 4 percent to its population. Some of this nonmetropolitan growth occurred in counties adjacent to SMSAs and represented a spillover of metropolitan population into nonmetropolitan counties. Recent research indicates, however, that the effect of proximity to metropolitan areas on nonmetropolitan growth rates was minimal.[4] That is, the more remote nonmetropolitan areas also saw increased growth rates. Areas previously rendered "obsolete" by changes in the organization of the national economy began gaining population again under the combined effect of several forces.

The Ozarks-Ouachitas region in southern Missouri, Arkansas, and eastern Oklahoma is a good example of a region that declined for several decades before a recent reversal based partially on the attraction of its environmental amenities. The region encompassing northern Michigan and that state's Upper Peninsula provides another good example of recent growth spurred by amenities. The most dramatic of regional turnabouts was associated with the new importance of coal in the nation's energy picture. For decades, the central Appalachian coal fields in eastern Kentucky, West Virginia, and the far western part of Virginia stood out as the prototype depressed region in the United States. Lyndon Johnson initiated his War on Poverty programs with a visit to Martin County, Kentucky, and some of the ensuing social programs focused on revitalizing such depressed areas. The recent population growth there, however, awaited the increased national demand for coal accompanying shortages of oil and natural gas. Mining companies have added thousands of workers to the payrolls in that region since 1973. Similarly, the diminished population loss in the long-depressed lower Mississippi Valley was at least partially attributable to increased national demand for the products of its most important natural resource—fertile farm land.

In some respects current changes in settlement patterns are a continuation of trends initiated with the widespread adoption of the automobile and reinforced by the rise in commercial air traffic. The introduction of those means of transportation—as was the case with the railroad and others before them—altered the accessibility of places so that different parts of the country became more or less attractive for investment.[5] Today, automobile ownership rates are still on the rise, and air travel is essential to business, government, and recreation. Growth patterns in the 1970s have presented convincing evidence, however, that the construction of interstate highways and buildup of commercial jet fleets in the 1960s were sufficiently radical changes in the transportation network— especially when combined with increasing personal incomes, improved pension programs, and recent advances in communications and information handling systems— to usher in a new epoch for the national settlement system. The improvements in transportation and increased incomes provided the means and encouraged people to see more of the country and thereby better educate themselves about alternate places where they might live.

IMPLICATIONS FOR THE FUTURE

What about the future? In view of the recent turbulence in the settlement system, predictions are tenuous. It seems safe to say that overall metropolitan growth will remain low because no large increase in birth rates comparable to that of the Baby Boom is anticipated. As has always been the case, some metropolises will grow faster than others because their economic and employment bases are distinctive and respond in different ways to the same general conditions. Environmental amenities seem destined to remain a powerful force in setting metropolitan growth patterns in the foreseeable future. In any event, even the large SMSAs currently experiencing population losses are not likely to fade away in the near future; the billions of dollars invested in the nation's metropolitan infrastructure guarantee their strength.

The future of nonmetropolitan America is more perplexing because reasons for its recently accelerated growth remain out of focus. Nonmetropolitan regions are as distinctive as metropolitan areas, and, to some extent, the fact that northern New England, northern Michigan, the Ozarks-Ouachitas region, the lower Mississippi Valley, and central Appalachia all began growing more rapidly at about the same time represents coincidence. Certainly the increased importance of environmental amenities played a major part in the reversals as large numbers of retired people as well as younger people with new job location flexibility were able to choose from a much wider set of residential alternatives than was previously possible. The changing international energy situation and the increasing profitability of certain kinds of farming also contributed to the new nonmetropolitan growth. Simultaneously, the nation was experiencing a severe economic recession and a new resurgence of anti-urban sentiment. The future of nonmetropolitan growth, then, depends on the combined effect of several forces, making predictions difficult. It is in order to note, however, that early retirement and more "footloose" employment have not eroded the significance of location. Despite earlier predictions that continued technological and societal advances would result in a more or less even scattering of people across the countryside, we have simply witnessed another in the series of population redistributions that accompany changes in technology and associated resource redefinitions.

INTERPRETING THE MAPS

Recent population redistribution has excited much popular and academic discussion. Despite this heightened interest, few useful maps are available on the topic. The following set of maps represents an attempt to begin filling this void. Using the county as our unit of analysis, we produced maps of population change, net migration, natural increase, and per capita income. We also included several maps of population change and net migration for SMSAs.

County Maps

The major advantage of this small atlas is the fact that, within the several topics, the maps are directly comparable over time. The county maps on population change (Maps 1-4), for example, are directly comparable because we used a consistent classification scheme, and because we always expressed rates of change in decennial terms. One therefore need not go through any mental calculations to compare the map "Population Change 1970-1975" with the map "Population Change 1920-1950"; we accounted for the different time spans and the compounding effect of population growth when preparing the maps.[6] The same is true for the county maps of net migration (Maps 8-10) and natural increase (Maps 14-16). The fact that the map "Net Migration 1970-1975" is generally much more darkly shaded than the map "Net Migration 1950-1960" reflects a real change in migration patterns rather than any peculiarity in map construction.

Making the maps comparable in this fashion has the disadvantage that the overall classification scheme for the maps on each topic represents a compromise of the schemes most suited for each of the three or four maps in that series. The classes we used are therefore not necessarily the "best" ones for the individual maps. Nevertheless, the approach adopted here clearly shows redistributions over time, and we deviated from it only on the change in per capita income maps (Maps 21-22). Those income maps represented no problem of compound growth, so that one can double the five-year rates of change in the 1969-1974 map (Map 21) to compare with those on the 1959-1969 map (Map 22). Since we used proportional classification schemes even on these maps, they too are directly comparable.

The composite maps on population change (Maps 5-7), net migration (Maps 11-13), and natural increase (Map 17) contain much information, but are slightly more difficult to interpret than the others. Consider the map "Change in Population Growth Rates between 1950-1960 and 1960-1970." As the legend on the map indicates, this map shows the differences between growth rates of the 1960s and those of the 1950s. The greater the positive change in a county's growth rate from the 1950s to the 1960s, the darker is its shading. Note that this does *not* mean that the most darkly shaded counties are the fastest growing ones. A hypothetical county A may be in the most darkly shaded class because it added 10 percent to its population in the 1950s and then added 45 percent in the 1960s. County B would be in the same class if its population declined by 25 percent in the 1950s and then increased by only 10 percent in the 1960s. In both cases, there would be a positive change of 35 percent from the 1950s to the 1960s. Conversely, counties in the lowest class might have grown substantially in the 1960s, but not quite so fast as they grew in the 1950s. The composite maps for net migration and natural increase lend themselves to similar interpretation.

A few additional notes are necessary for a clear understanding of the county maps. First, the population change, net migration, and natural increase maps all show information in terms of percentage changes. The maps therefore do not address the subjects of population size or density. The large number of counties that fell in the most extreme positive class on the map "Net Migration 1970-1975" illustrate this point clearly; many of these counties had small base populations, and achieved high rates of net inmigration by the addition of only small numbers of people to the county populations. Secondly, note that we transformed five-year rates into decennial terms for the calculations that produced the composite maps on these three topics.

For the map "Change in Population Growth Rates between 1960-1970 and 1970-1975," for example, we obtained the mapped data by subtracting the growth rates 1960-1970 from the growth rates 1970-1975 as expressed in decennial terms.

Thirdly, the income maps warrant brief elaboration. The maps of per capita income (Maps 18-20) feature classification schemes of county incomes based on percentage deviations from the national per capita incomes. By this approach, a county in 1974 had a value of 100 percent if it had the same per capita income as did the nation that year. The county therefore would have appeared with the darkest shading in the map "Per Capita Income 1974." The change in per capita income maps (Maps 21-22) show differences in these values. For example, if a county had a per capita income 95 percent of the national average in 1969 and a per capita income 90 percent of the national average in 1974, its change would be -5 percent, and the county would therefore receive the lightest shading on the map "Change in Per Capita Income 1969-1974."

Finally, we want to emphasize the volatility of the income data for some parts of the country. Agricultural incomes strongly influence county averages in such sparsely settled parts of the country as the Great Plains, and agricultural incomes can change drastically from one year to the next with the weather and the market. Because the predominantly agricultural counties are often large in area, change in agricultural income has sizable impact on income maps. The map "Change in Per Capita Income 1969-1974" shows dramatically an increase in agricultural incomes in the northern Great Plains. It would make sense to average income data for several consecutive years, but those data are not available at the county level. In any event, the income maps do show evidence of strong forces on settlement patterns and are especially reliable for the more densely settled parts of the country.

SMSA Maps

The SMSA maps of population change (Maps 23-25) and net migration (Map 26) are interpreted in the same way as the corresponding county maps. Except in New England, SMSAs are combinations of counties, so that we could compute SMSA populations and net migration simply by adding the figures for the constituent counties. In New England, SMSAs are combinations of towns and often cut across counties. For mapping convenience, we used New England County Metropolitan Areas (NECMAs) for that part of the country.[7] NECMAs meet the criteria for SMSAs in other states and follow county lines. They are larger and fewer in number than New England SMSAs.

DATA SOURCES FOR THE MAPS

The data for the maps came from a variety of sources.

- The Census Bureau's *Intercensal Demographic File* provided 1970 population, estimated 1975 population, 1969 per capita income, and estimated 1974 per capita income. The data on this computer file are the same as those published in the P-25 series of the *Current Population Reports,* nos. 649-698, except for the fact that estimates were left unrounded on the computer file. The estimated 1975 population figures are superior to the "provisional" estimates published by the Federal-State Cooperative Program, but less certain than that program's more recently released "revised" 1975 estimates.
- County populations for 1920, 1950, and 1960 are available in the *Census of Population* for each of those years.
- We calculated natural increase by using birth and death figures for the 1950s, 1960s, and the 1970s. Birth and death figures for the 1950s are available in *Current Population Reports,* Series P-23, no. 7; the same data for the 1960s appear in *Current Population Reports,* Series P-25, no. 461; and the data for the first half of the 1970s appear in rounded form, by state, in *Current Population Reports,* Series P-26. We obtained from the Census Bureau unrounded figures for the 1970s.
- We calculated net migration figures as residuals of population changes after births and deaths were accounted for.
- We computed 1959 per capita income with figures on the mean income of recipients and the number of recipients, as reported in the 1960 *Census of Population.*

FOOTNOTES

[1]Throughout the paper, the term *nonmetropolitan* refers to counties outside the Standard Metropolitan Statistical Areas (SMSAs) as defined in 1975. Conversely, metropolitan counties are those within SMSAs. All 1975 SMSAs and their constituent counties are given in *Standard Metropolitan Statistical Areas,* Executive Office of the President, Office of Management and Budget, U.S. Government Printing Office, Washington, D.C., 1975.

[2]The calculation of population change in the first half of the 1970s was based on the use of 1975 population estimates (and 1970 counts). The estimates are available on the *Intercensal Demographic File,* a computer tape available from the U.S. Bureau of the Census. These are the same estimates that appear (in rounded form) in *Current Population Reports,* Series P-25, nos. 649-698, U.S. Bureau of the Census, U.S. Government Printing Office, Washington, D.C., 1977.

[3]Our use of constant 1975 SMSA boundaries provided areal consistency in comparisons of metropolitan growth rates from one period to another. This approach offered strong computational advantages and prevented the confusion of population growth achieved through natural increase and migration with growth achieved through areal expansion. A drawback of the approach is that it prematurely conferred metropolitan status on some counties. The early inclusion of these counties in the nation's metropolitan sector biased the overall metropolitan and nonmetropoli tan growth rates as well as the growth rates of some SMSAs for the 1950s and 1960s. However, the bias was in most cases slight because the counties in question had relatively small populations.

The Minneapolis-St. Paul SMSA provides an example of the boundary problem. Our computations showed that this SMSA grew by 27.6 percent in the 1950s and by 23.0 percent the following decade. These figures were based on the growth of the ten counties that comprised the SMSA in 1975, but in 1960 and 1970 there were only five counties in the SMSA. The five counties added to the SMSA in 1973 had a minimal impact on our calculations because they had small populations in the 1950s and 1960s. If we had not included these "extra" five counties in our calculations, we would have shown Minneapolis-St. Paul SMSA growth rates of 28.8 percent for the 1950s and 22.4 percent for the 1960s. Then it would have been necessary to accomodate the total populations of the "extra" five counties as part of the SMSA's growth in the 1970s.

[4]David J. Borchert and James D. Fitzsimmons, "Population Redistribution in the United States, 1950-1975," paper presented at the annual meeting of the Association of American Geographers, New Orleans, April 10, 1978.

[5]The relationship between technological innovation and settlement patterns is best discussed by John R. Borchert, "American Metropolitan Evolution," *Geographical Review,* Vol. 57 (1967), pp. 301-332.

[6]Growth rates for 1970-1975 were converted into decennial rates by the equation

$$A^2=B$$

where A=5-year growth rate
B=the equivalent decennial growth rate.

As an example, consider a county that grew by 10 percent, or at a rate of 1.10, between 1970 and 1975. The decennial growth rate for that county would be

$$1.10^2=1.21.$$

A similar procedure was used to convert the growth rates 1920-1950 to decennial rates. Here the appropriate equation is

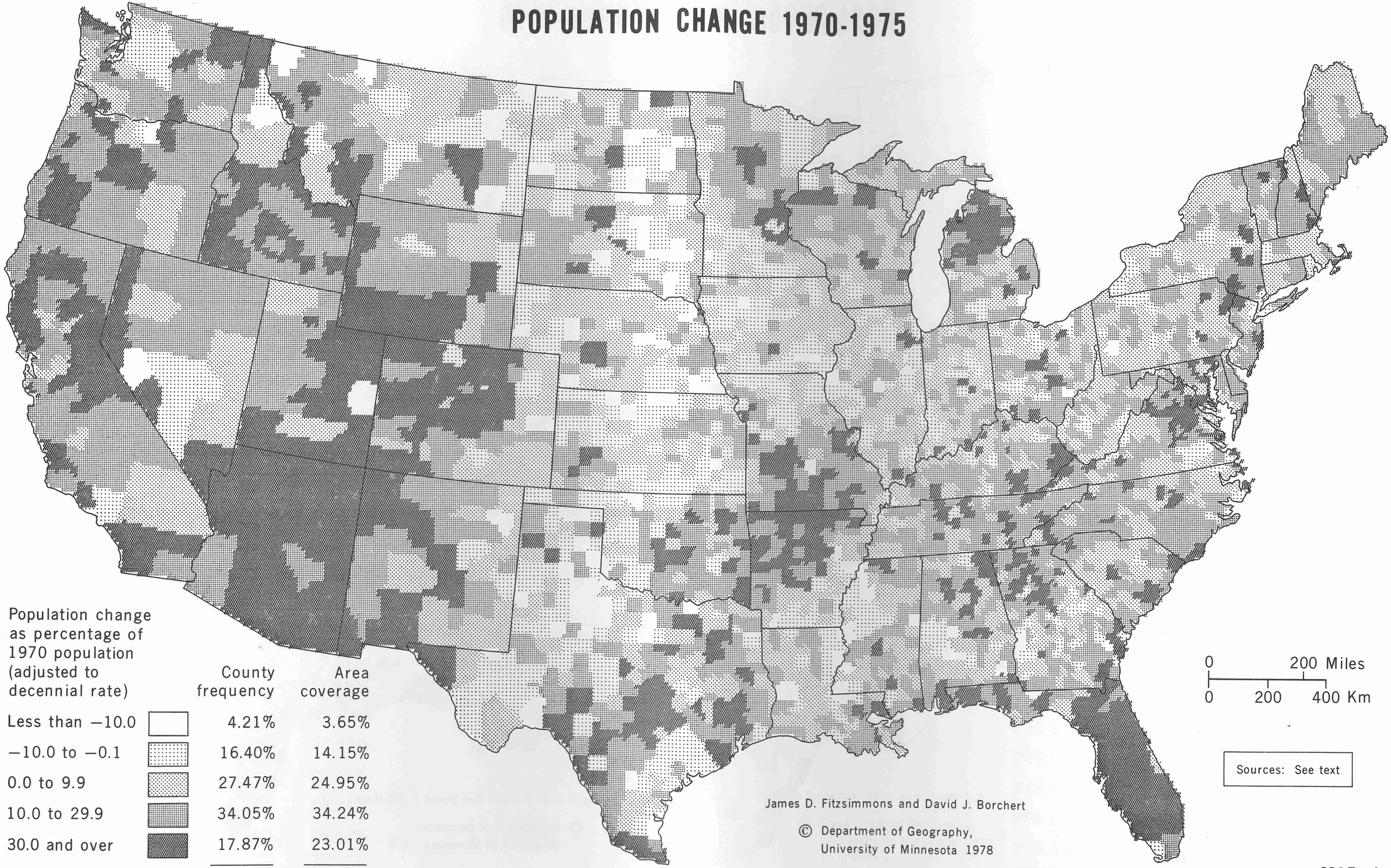
$$\sqrt[3]{A}=B$$

where A=30-year growth rate
B=the equivalent decennial growth rate.

The same logic applies to the conversions for net migration and natural increase.

[7]For a list of NECMAs, see *Standard Metropolitan Statistical Areas, op. cit.,* footnote 1, pp.89-90.

POPULATION CHANGE 1970-1975



Population change as percentage of 1970 population (adjusted to decennial rate)	County frequency	Area coverage
Less than −10.0	4.21%	3.65%
−10.0 to −0.1	16.40%	14.15%
0.0 to 9.9	27.47%	24.95%
10.0 to 29.9	34.05%	34.24%
30.0 and over	17.87%	23.01%
	100.00%	100.00%

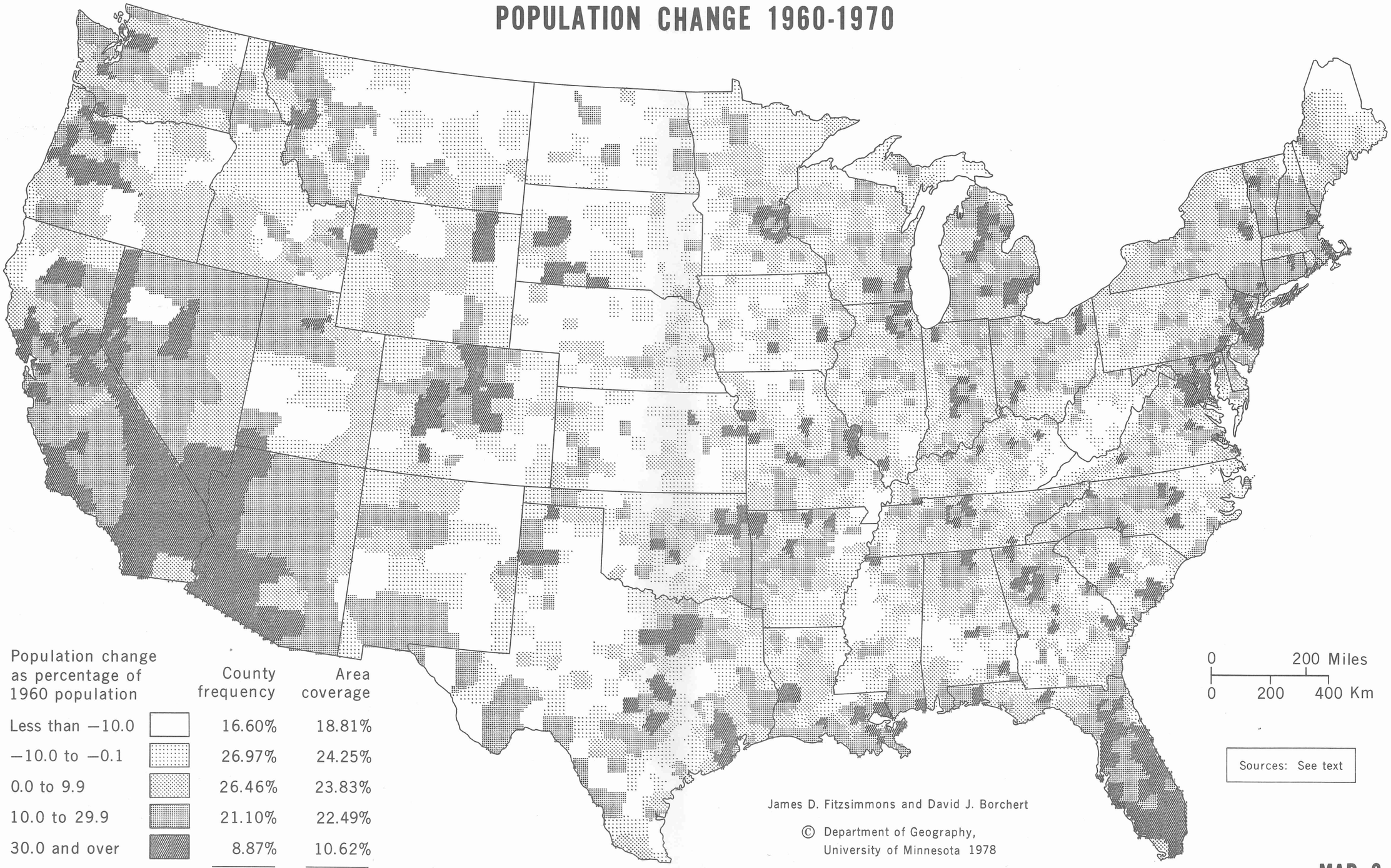
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 1

POPULATION CHANGE 1960-1970



Population change as percentage of 1960 population	County frequency	Area coverage
Less than −10.0	16.60%	18.81%
−10.0 to −0.1	26.97%	24.25%
0.0 to 9.9	26.46%	23.83%
10.0 to 29.9	21.10%	22.49%
30.0 and over	8.87%	10.62%
	100.00%	100.00%

0 200 Miles
0 200 400 Km

Sources: See text

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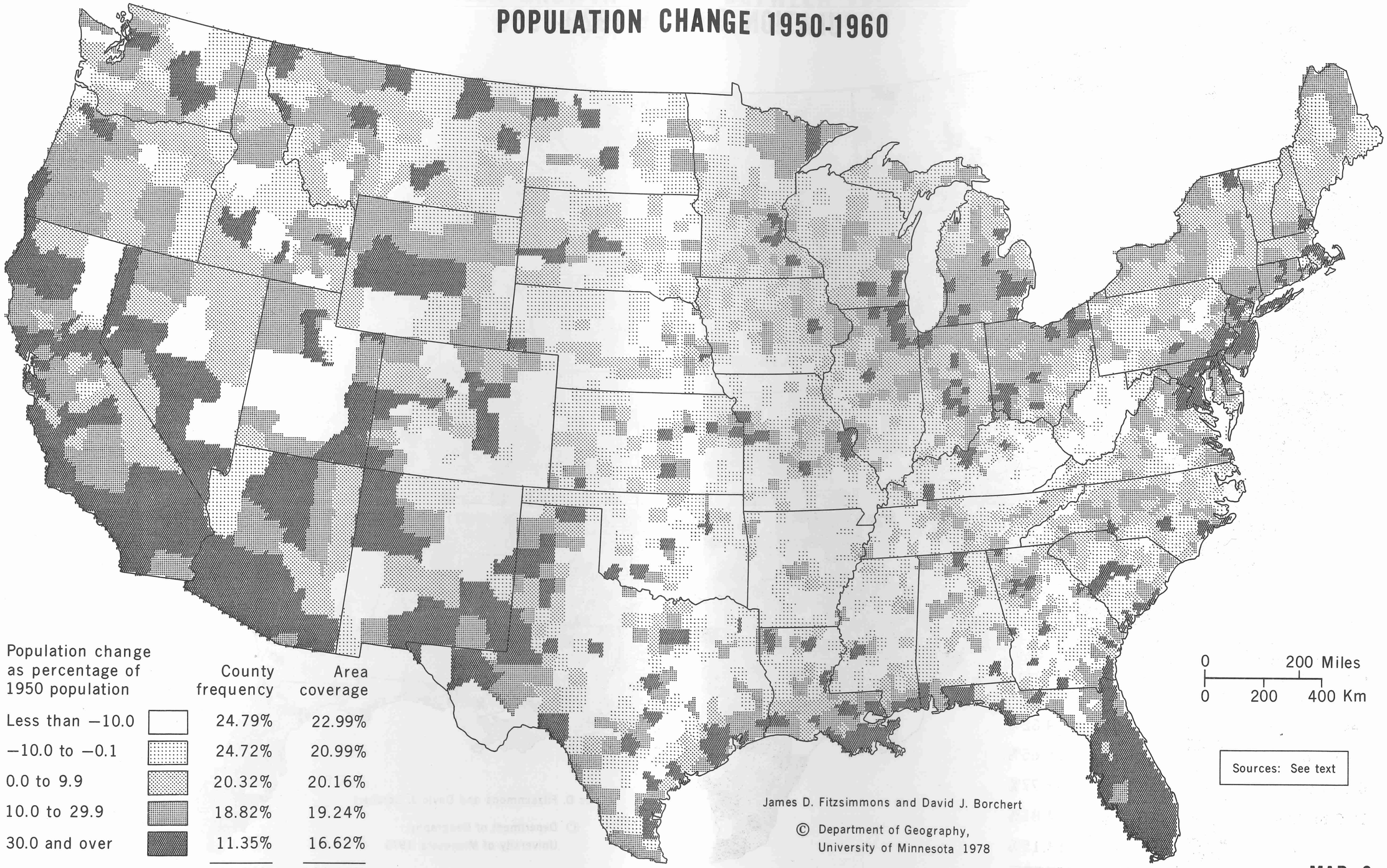
MAP 2

POPULATION CHANGE 1950-1960



Population change as percentage of 1950 population	County frequency	Area coverage
Less than −10.0	24.79%	22.99%
−10.0 to −0.1	24.72%	20.99%
0.0 to 9.9	20.32%	20.16%
10.0 to 29.9	18.82%	19.24%
30.0 and over	11.35%	16.62%
	100.00%	100.00%

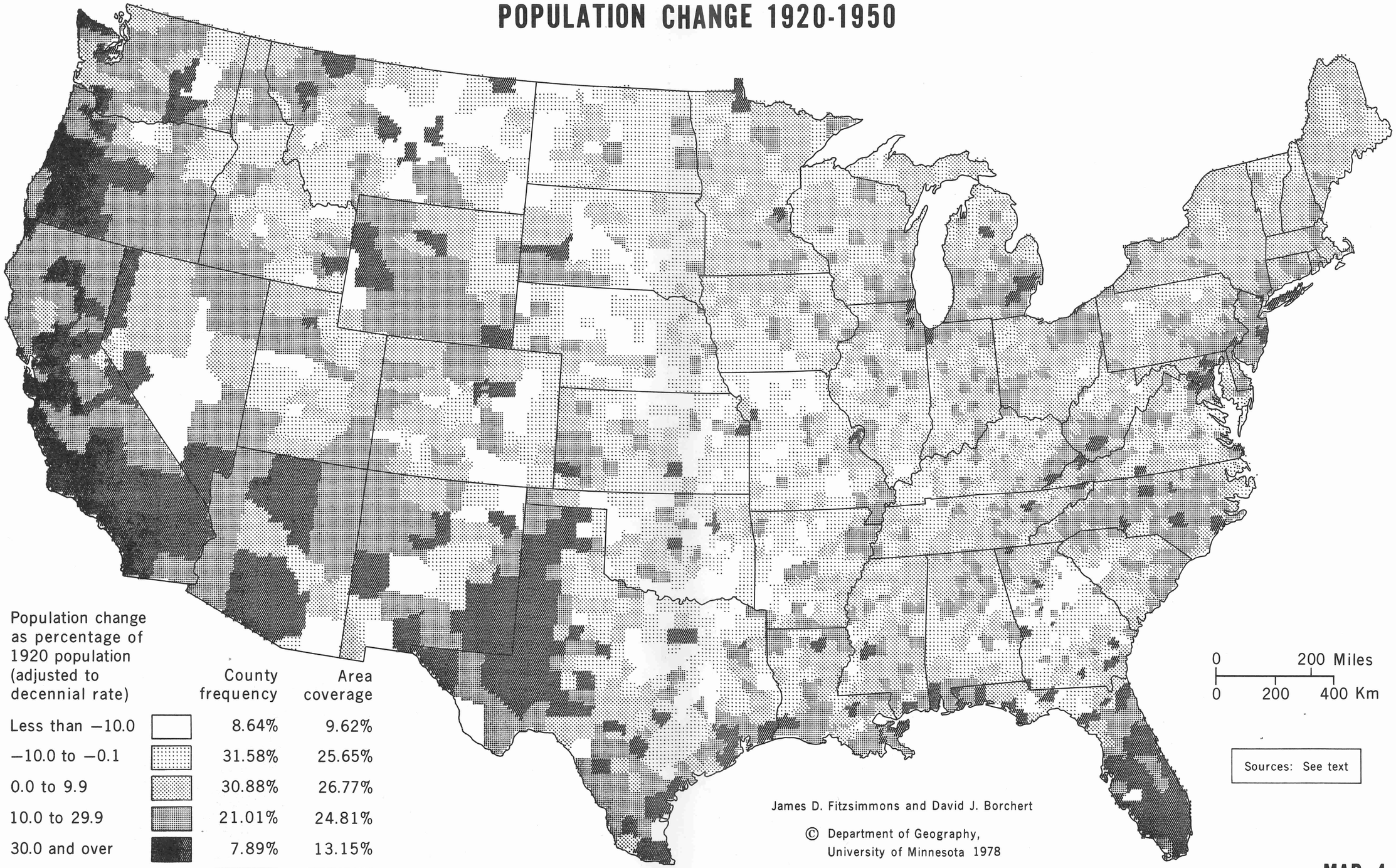
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 3

POPULATION CHANGE 1920-1950



Population change as percentage of 1920 population (adjusted to decennial rate)	County frequency	Area coverage
Less than −10.0	8.64%	9.62%
−10.0 to −0.1	31.58%	25.65%
0.0 to 9.9	30.88%	26.77%
10.0 to 29.9	21.01%	24.81%
30.0 and over	7.89%	13.15%
	100.00%	100.00%

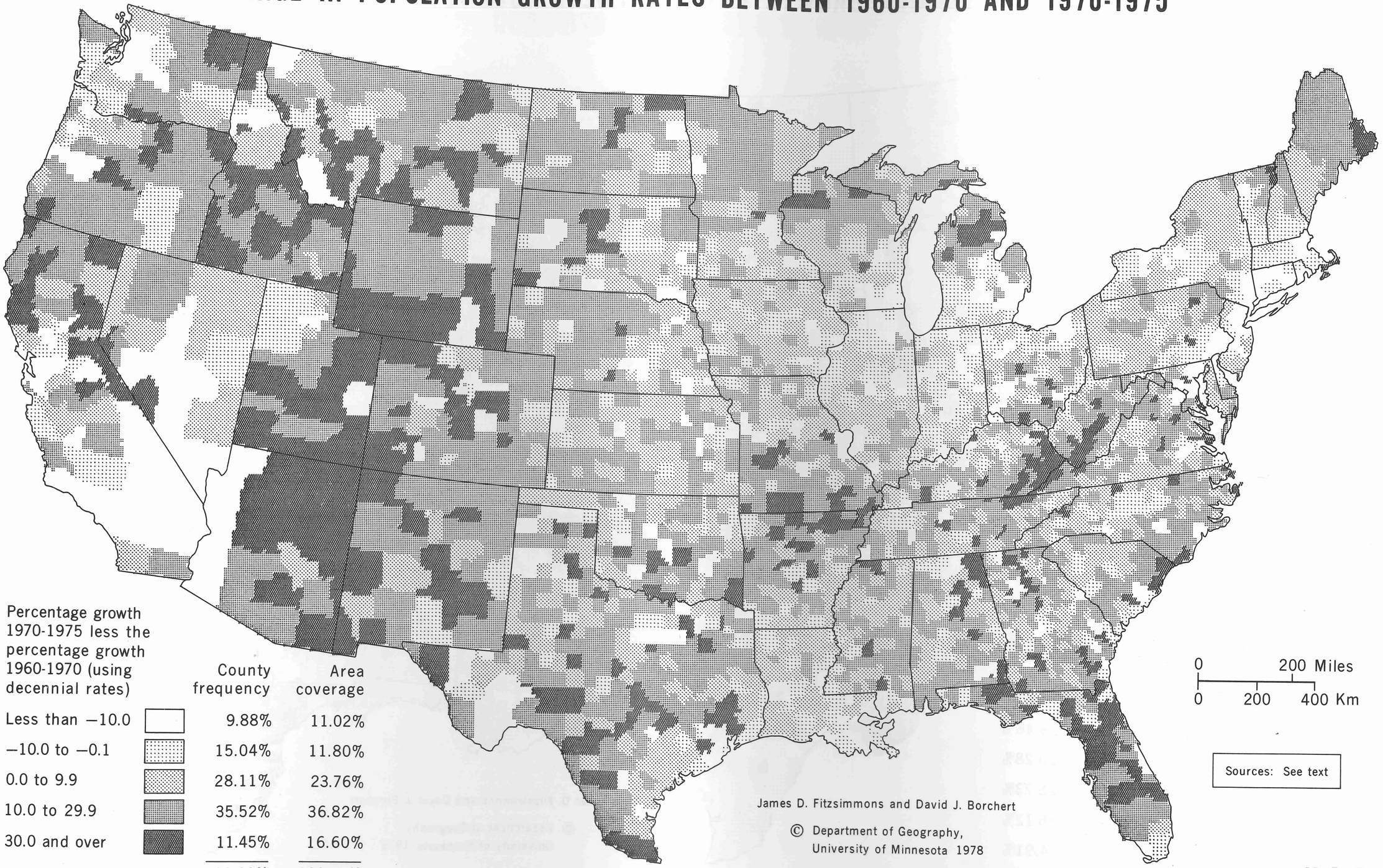
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 4

CHANGE IN POPULATION GROWTH RATES BETWEEN 1960-1970 AND 1970-1975



Percentage growth 1970-1975 less the percentage growth 1960-1970 (using decennial rates)	County frequency	Area coverage
Less than −10.0	9.88%	11.02%
−10.0 to −0.1	15.04%	11.80%
0.0 to 9.9	28.11%	23.76%
10.0 to 29.9	35.52%	36.82%
30.0 and over	11.45%	16.60%
	100.00%	100.00%

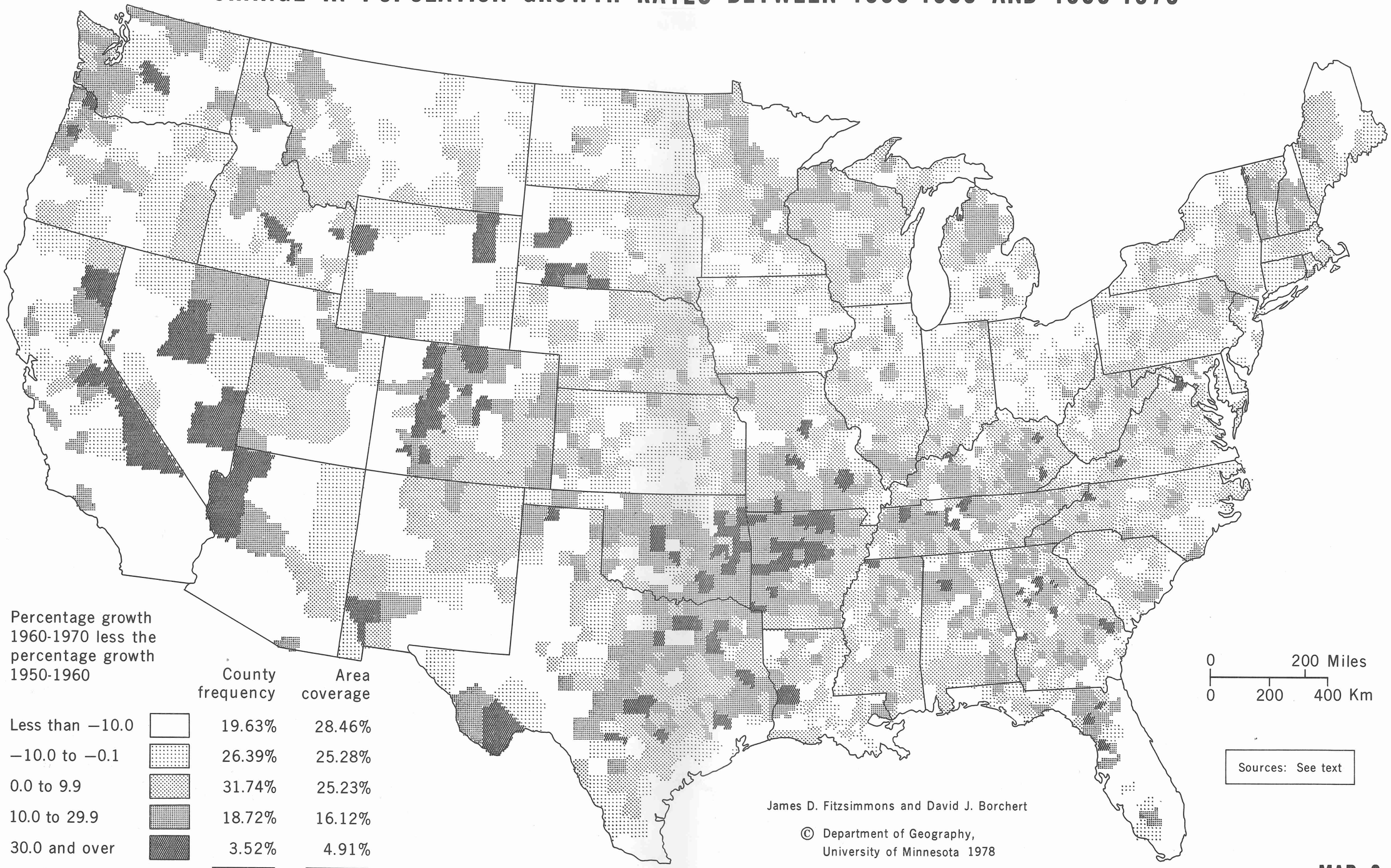
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 5

CHANGE IN POPULATION GROWTH RATES BETWEEN 1950-1960 AND 1960-1970



Percentage growth 1960-1970 less the percentage growth 1950-1960

	County frequency	Area coverage
Less than −10.0	19.63%	28.46%
−10.0 to −0.1	26.39%	25.28%
0.0 to 9.9	31.74%	25.23%
10.0 to 29.9	18.72%	16.12%
30.0 and over	3.52%	4.91%
	100.00%	100.00%

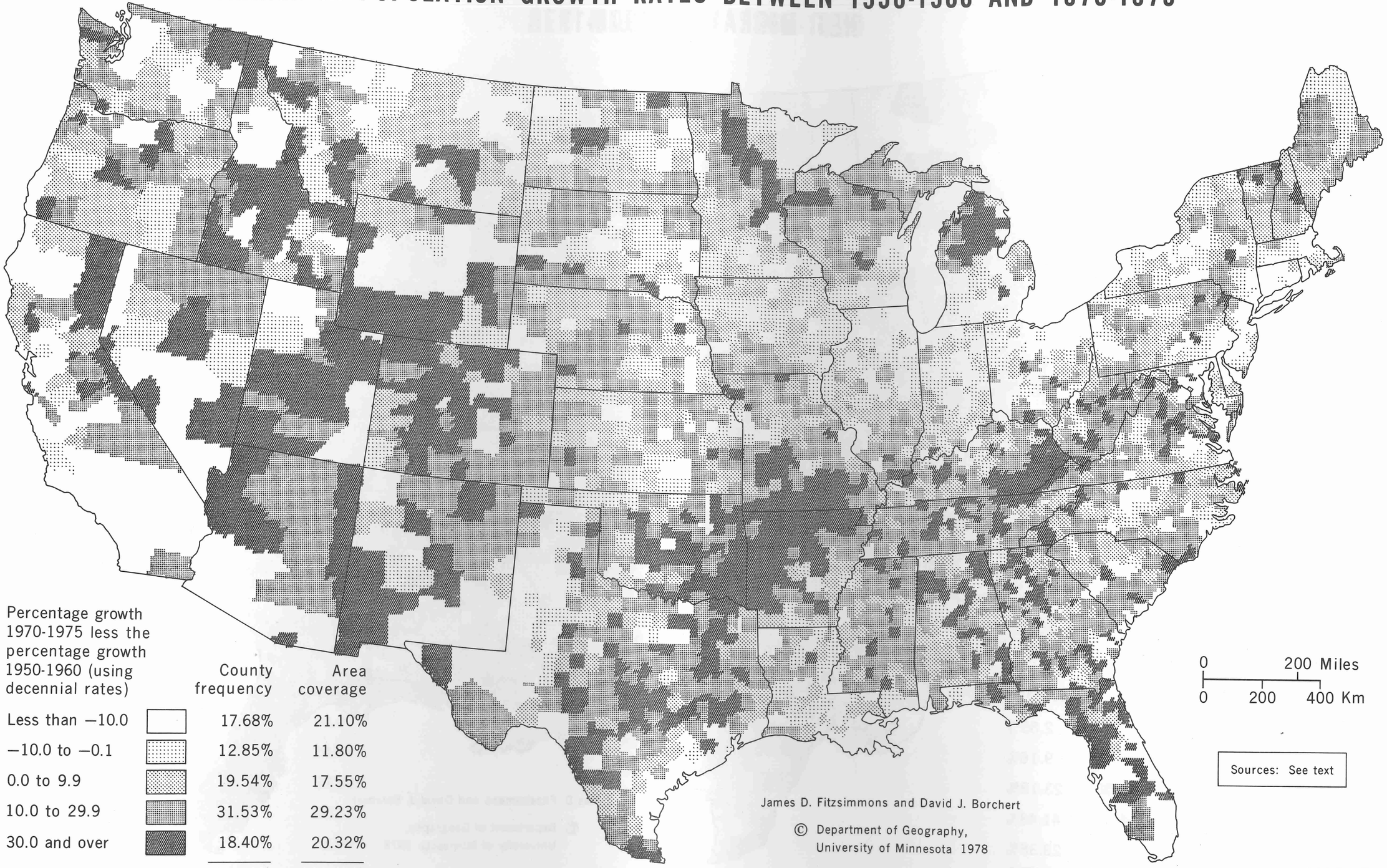
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 6

CHANGE IN POPULATION GROWTH RATES BETWEEN 1950-1960 AND 1970-1975



Percentage growth 1970-1975 less the percentage growth 1950-1960 (using decennial rates)	County frequency	Area coverage
Less than −10.0	17.68%	21.10%
−10.0 to −0.1	12.85%	11.80%
0.0 to 9.9	19.54%	17.55%
10.0 to 29.9	31.53%	29.23%
30.0 and over	18.40%	20.32%
	100.00%	100.00%

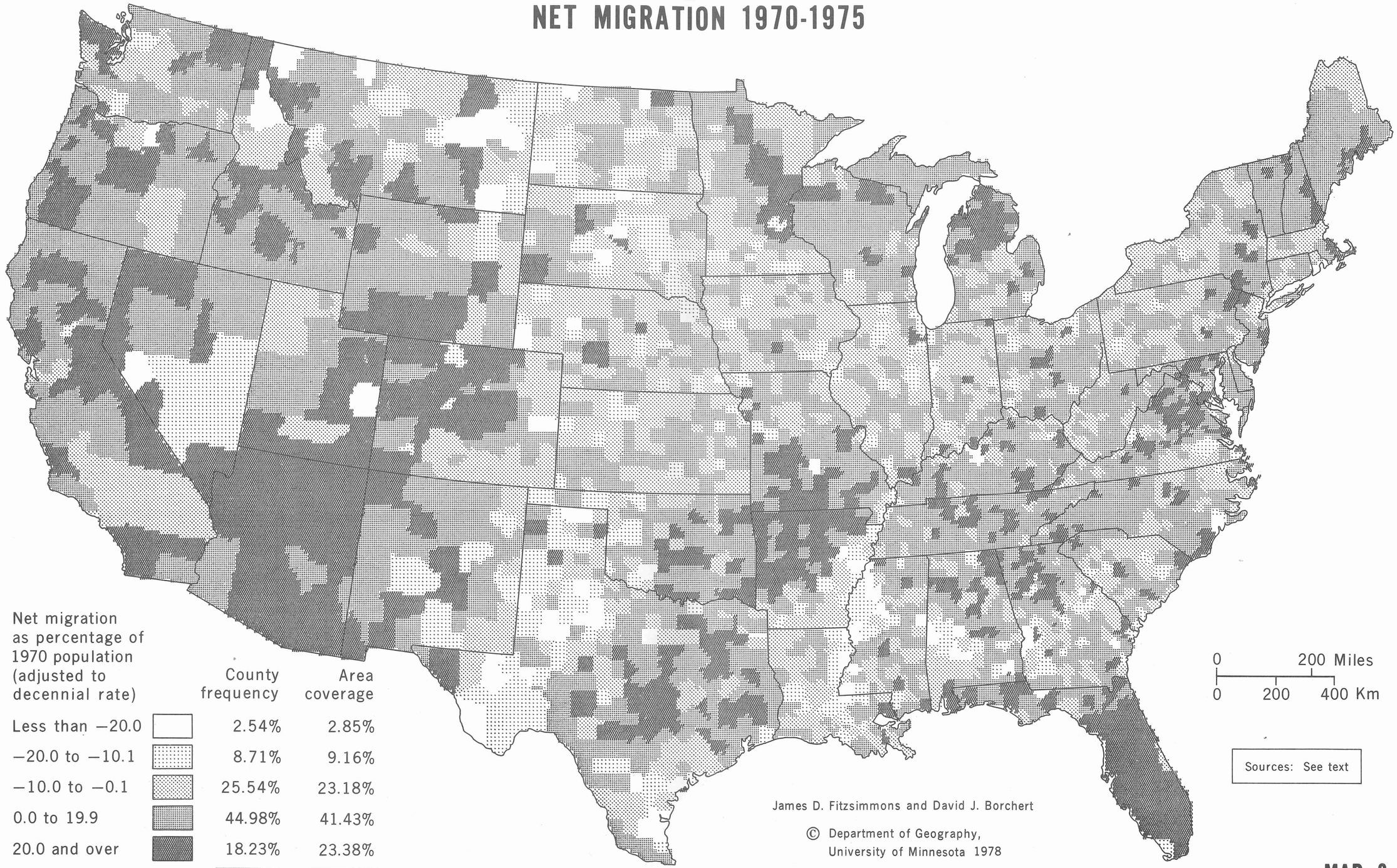
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 7

NET MIGRATION 1970-1975



Net migration as percentage of 1970 population (adjusted to decennial rate)	County frequency	Area coverage
Less than −20.0	2.54%	2.85%
−20.0 to −10.1	8.71%	9.16%
−10.0 to −0.1	25.54%	23.18%
0.0 to 19.9	44.98%	41.43%
20.0 and over	18.23%	23.38%
	100.00%	100.00%

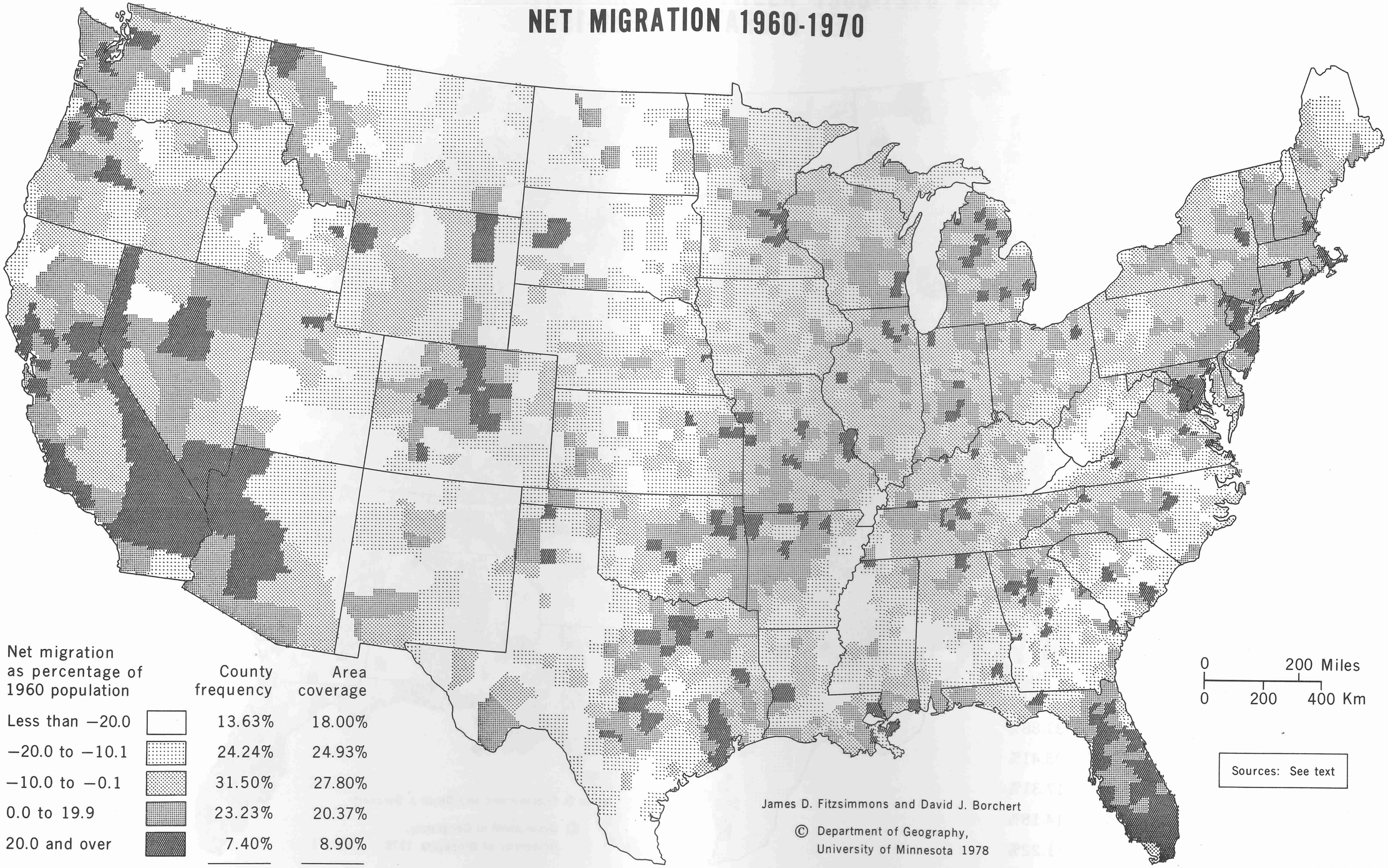
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 8

NET MIGRATION 1960-1970



Net migration as percentage of 1960 population	County frequency	Area coverage
Less than −20.0	13.63%	18.00%
−20.0 to −10.1	24.24%	24.93%
−10.0 to −0.1	31.50%	27.80%
0.0 to 19.9	23.23%	20.37%
20.0 and over	7.40%	8.90%
	100.00%	100.00%

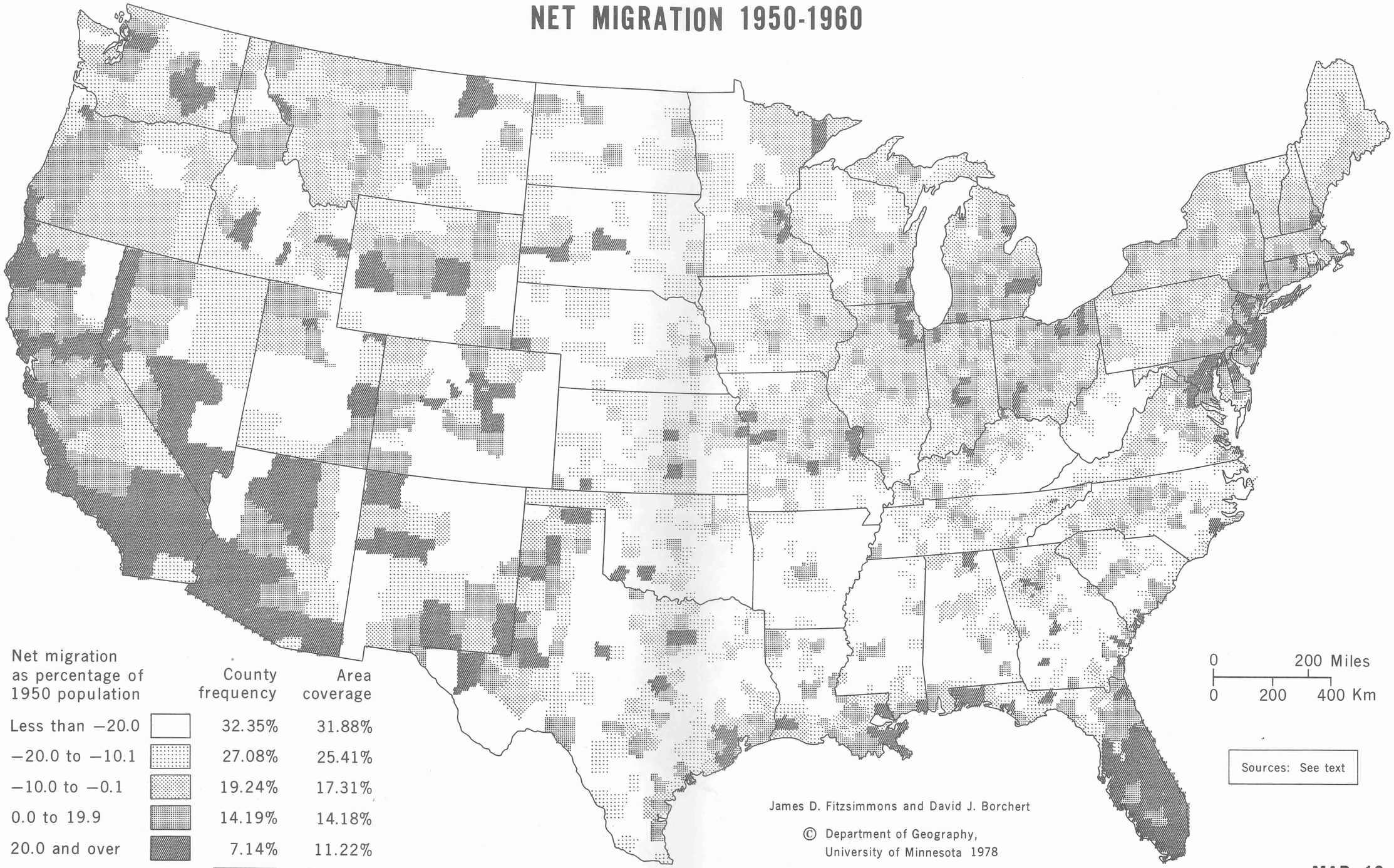
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 9

NET MIGRATION 1950-1960



Net migration as percentage of 1950 population	County frequency	Area coverage
Less than −20.0	32.35%	31.88%
−20.0 to −10.1	27.08%	25.41%
−10.0 to −0.1	19.24%	17.31%
0.0 to 19.9	14.19%	14.18%
20.0 and over	7.14%	11.22%
	100.00%	100.00%

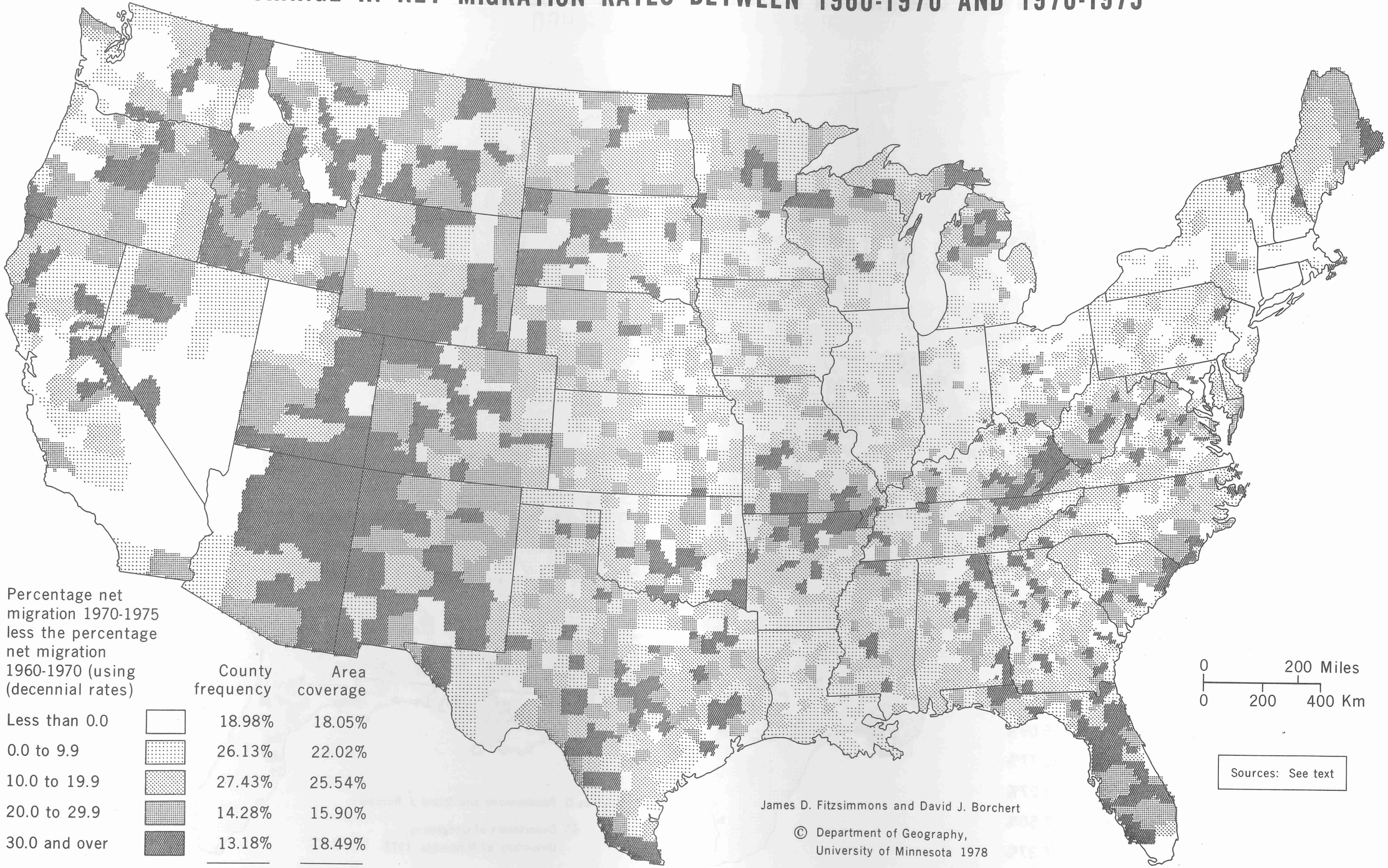
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 10

CHANGE IN NET MIGRATION RATES BETWEEN 1960-1970 AND 1970-1975



Percentage net migration 1970-1975 less the percentage net migration 1960-1970 (using (decennial rates)	County frequency	Area coverage
Less than 0.0	18.98%	18.05%
0.0 to 9.9	26.13%	22.02%
10.0 to 19.9	27.43%	25.54%
20.0 to 29.9	14.28%	15.90%
30.0 and over	13.18%	18.49%
	100.00%	100.00%

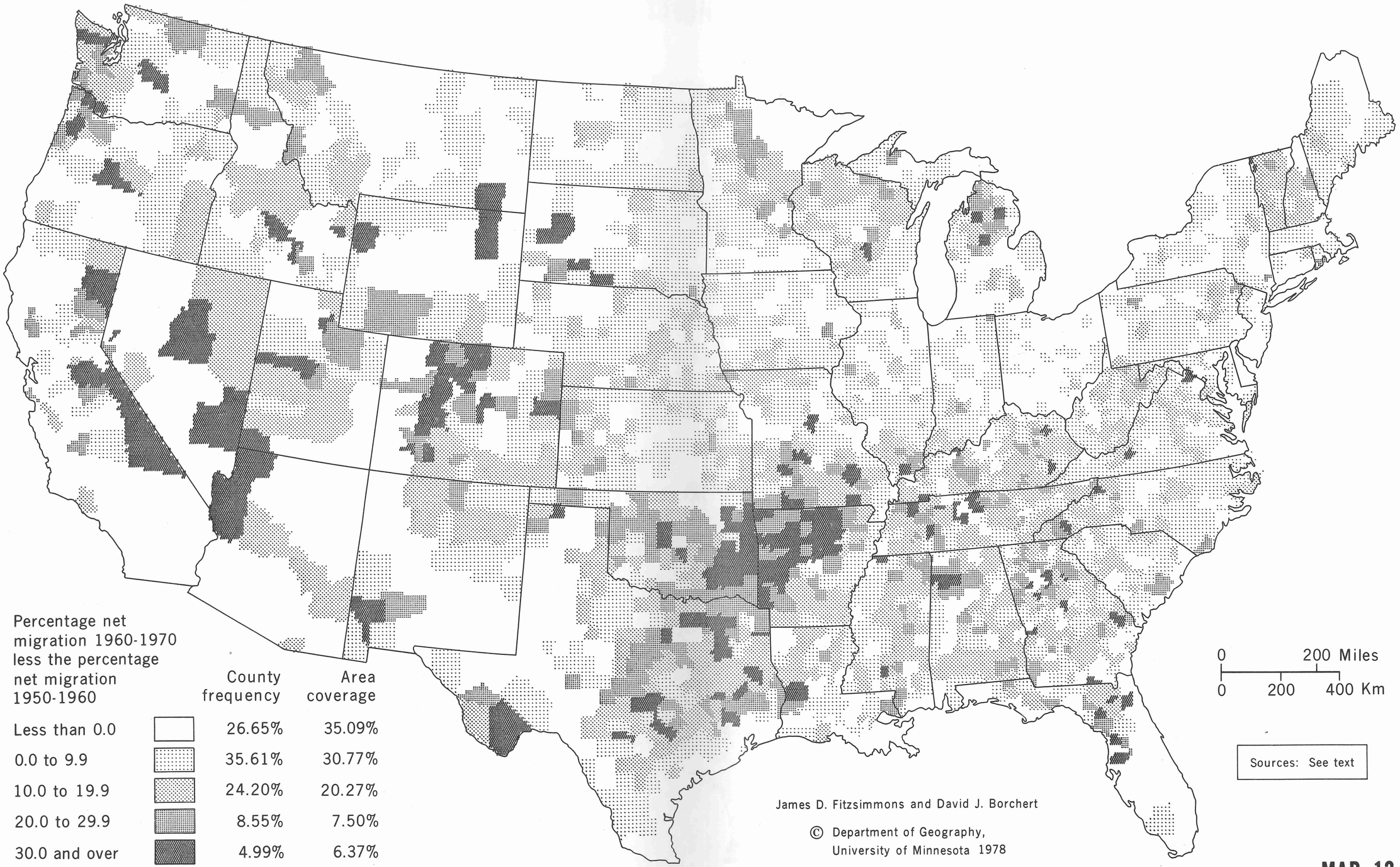
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 11

CHANGE IN NET MIGRATION RATES BETWEEN 1950-1960 AND 1960-1970



Percentage net migration 1960-1970 less the percentage net migration 1950-1960	County frequency	Area coverage
Less than 0.0	26.65%	35.09%
0.0 to 9.9	35.61%	30.77%
10.0 to 19.9	24.20%	20.27%
20.0 to 29.9	8.55%	7.50%
30.0 and over	4.99%	6.37%
	100.00%	100.00%

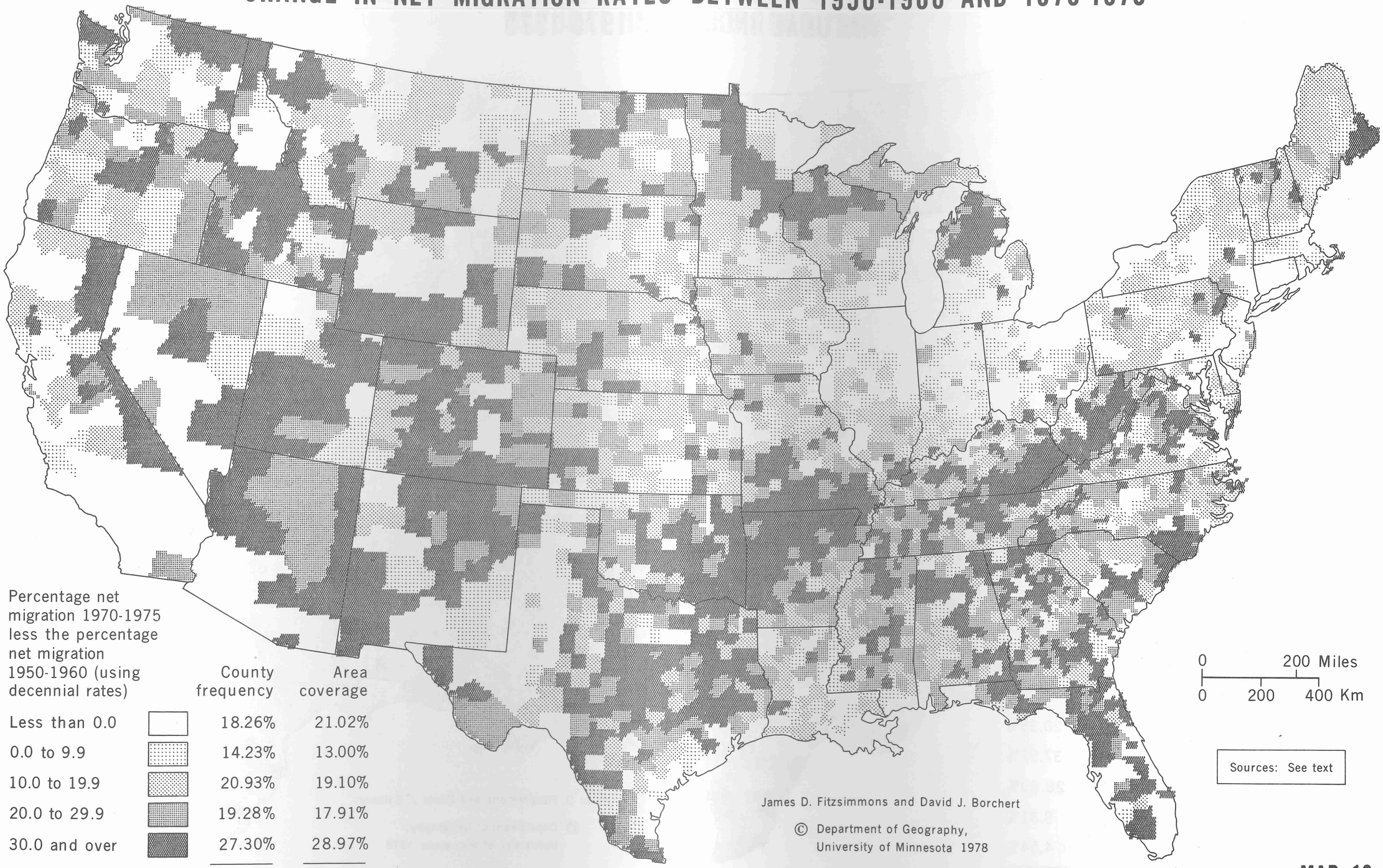
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 12

CHANGE IN NET MIGRATION RATES BETWEEN 1950-1960 AND 1970-1975



Percentage net migration 1970-1975 less the percentage net migration 1950-1960 (using decennial rates)	County frequency	Area coverage
Less than 0.0	18.26%	21.02%
0.0 to 9.9	14.23%	13.00%
10.0 to 19.9	20.93%	19.10%
20.0 to 29.9	19.28%	17.91%
30.0 and over	27.30%	28.97%
	100.00%	100.00%

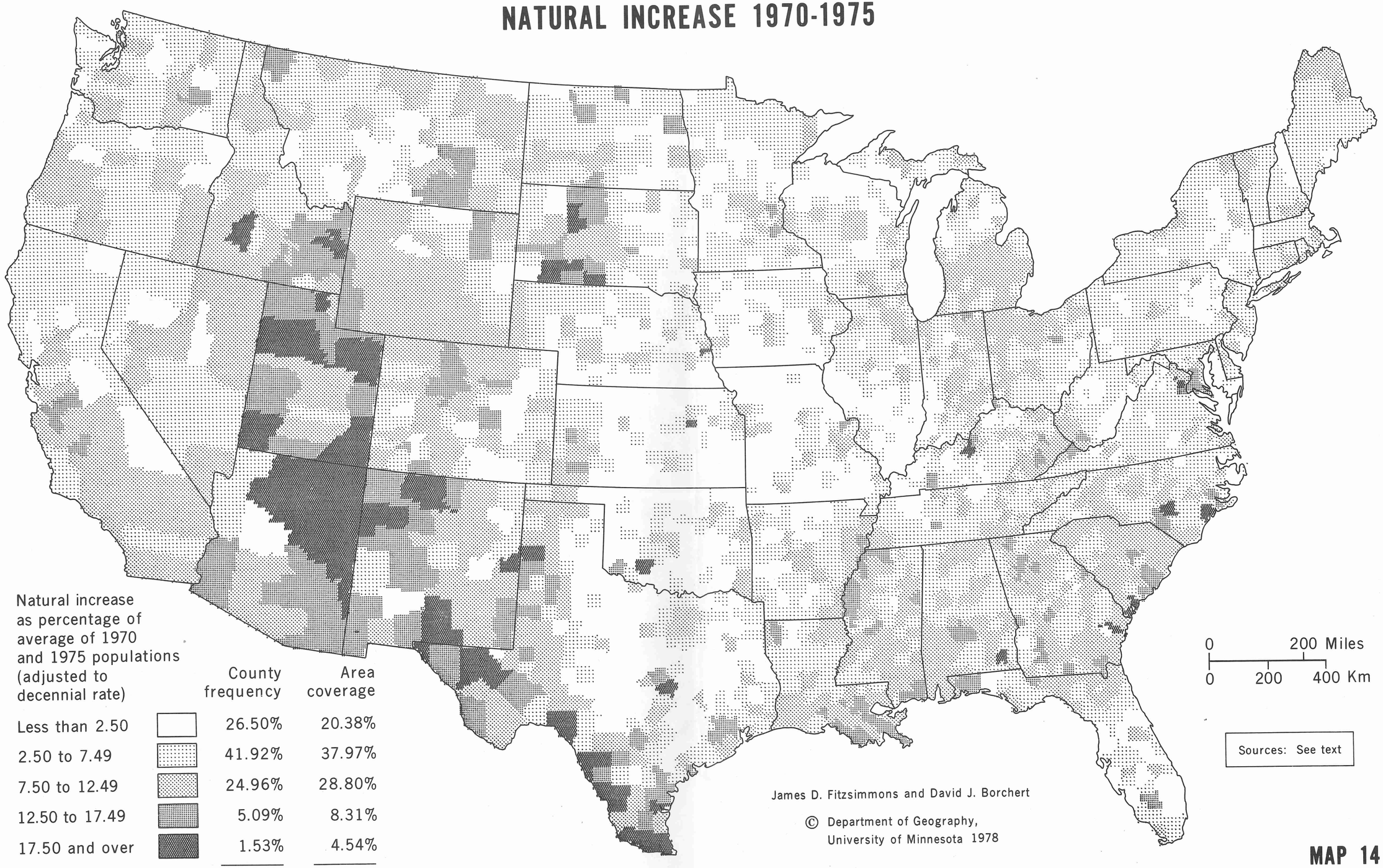
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 13

NATURAL INCREASE 1970-1975



Natural increase as percentage of average of 1970 and 1975 populations (adjusted to decennial rate)

	County frequency	Area coverage
Less than 2.50	26.50%	20.38%
2.50 to 7.49	41.92%	37.97%
7.50 to 12.49	24.96%	28.80%
12.50 to 17.49	5.09%	8.31%
17.50 and over	1.53%	4.54%
	100.00%	100.00%

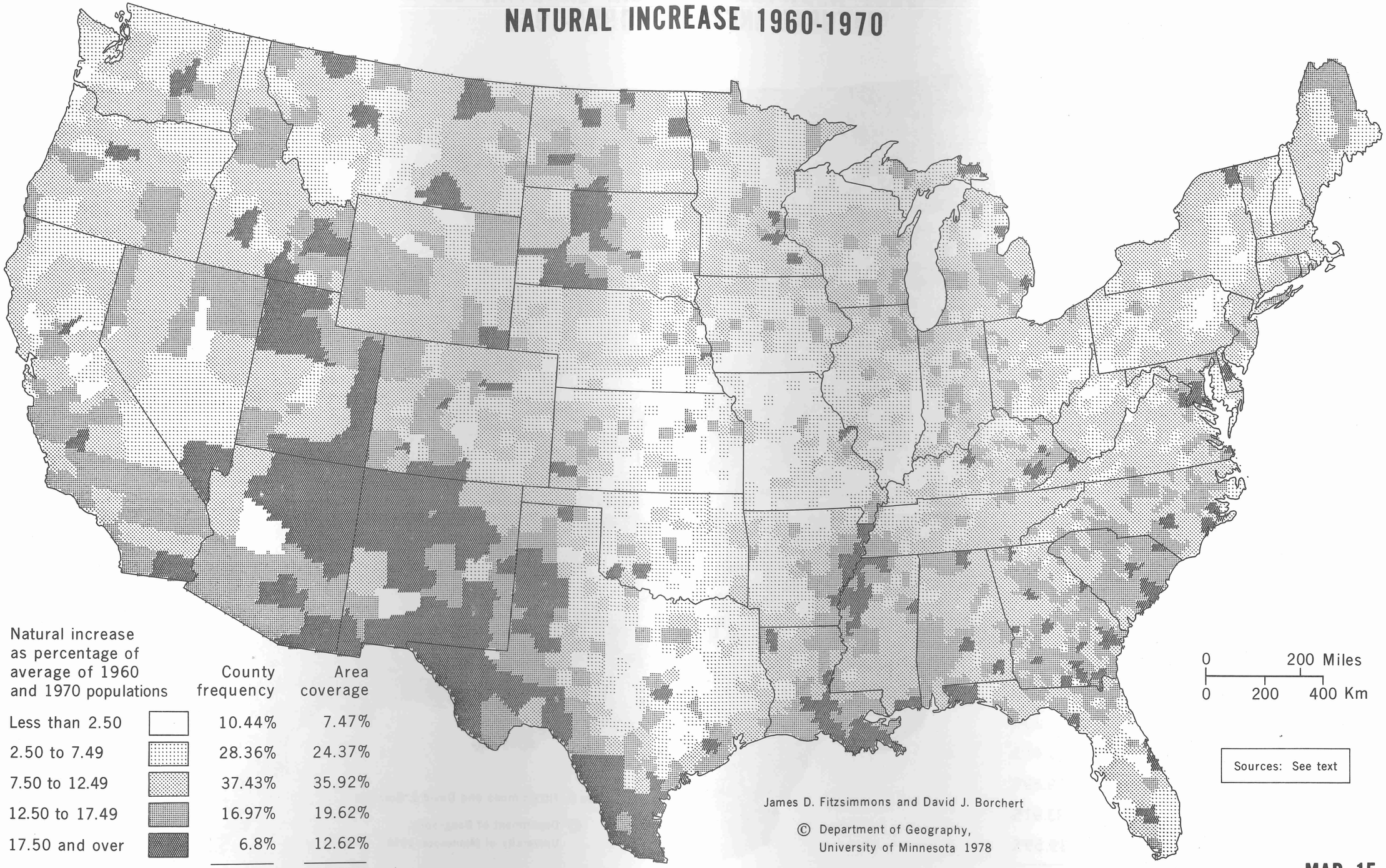
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 14

NATURAL INCREASE 1960-1970



Natural increase as percentage of average of 1960 and 1970 populations	County frequency	Area coverage
Less than 2.50	10.44%	7.47%
2.50 to 7.49	28.36%	24.37%
7.50 to 12.49	37.43%	35.92%
12.50 to 17.49	16.97%	19.62%
17.50 and over	6.8%	12.62%
	100.00%	100.00%

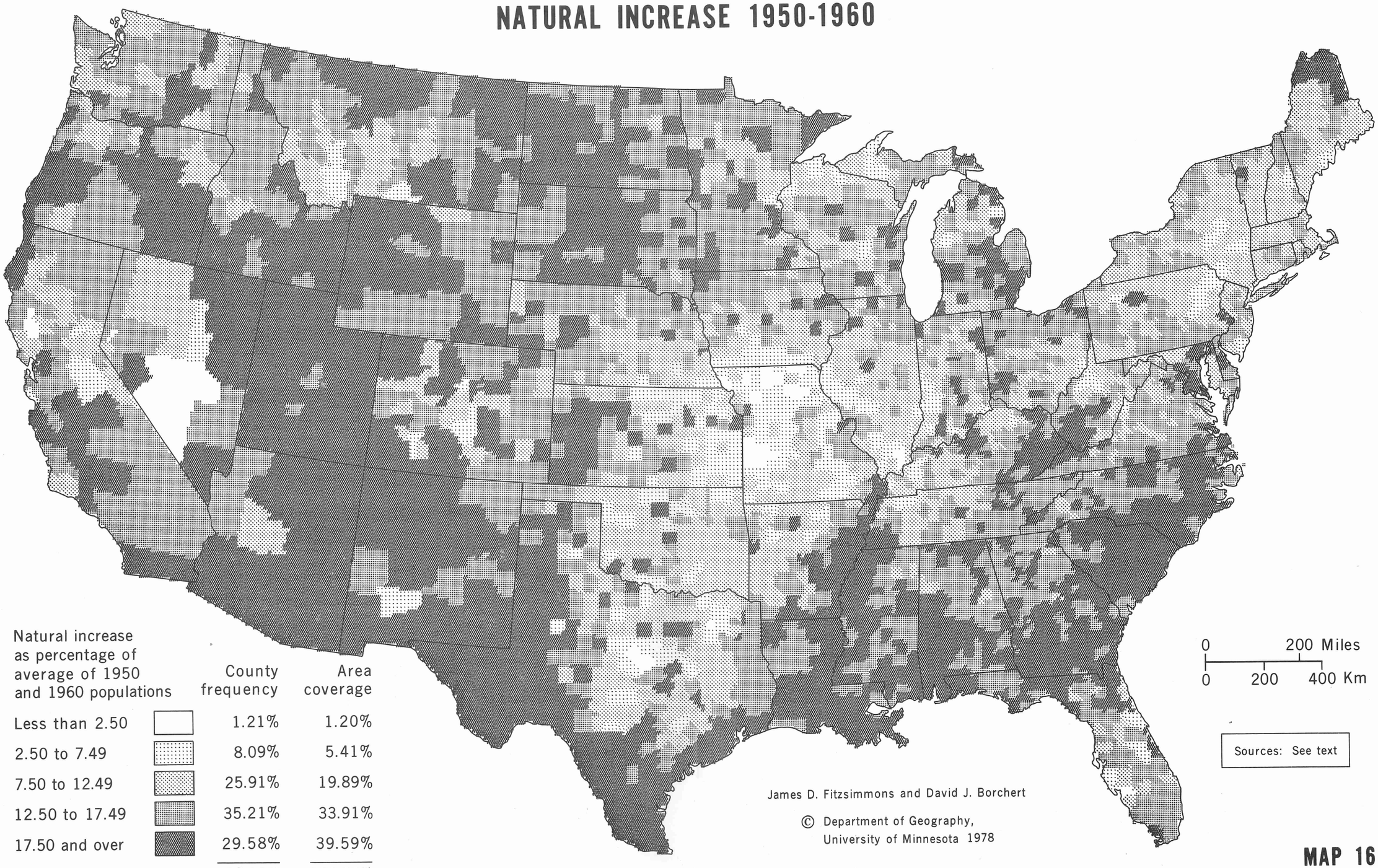
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 15

NATURAL INCREASE 1950-1960



Natural increase as percentage of average of 1950 and 1960 populations	County frequency	Area coverage
Less than 2.50	1.21%	1.20%
2.50 to 7.49	8.09%	5.41%
7.50 to 12.49	25.91%	19.89%
12.50 to 17.49	35.21%	33.91%
17.50 and over	29.58%	39.59%
	100.00%	100.00%

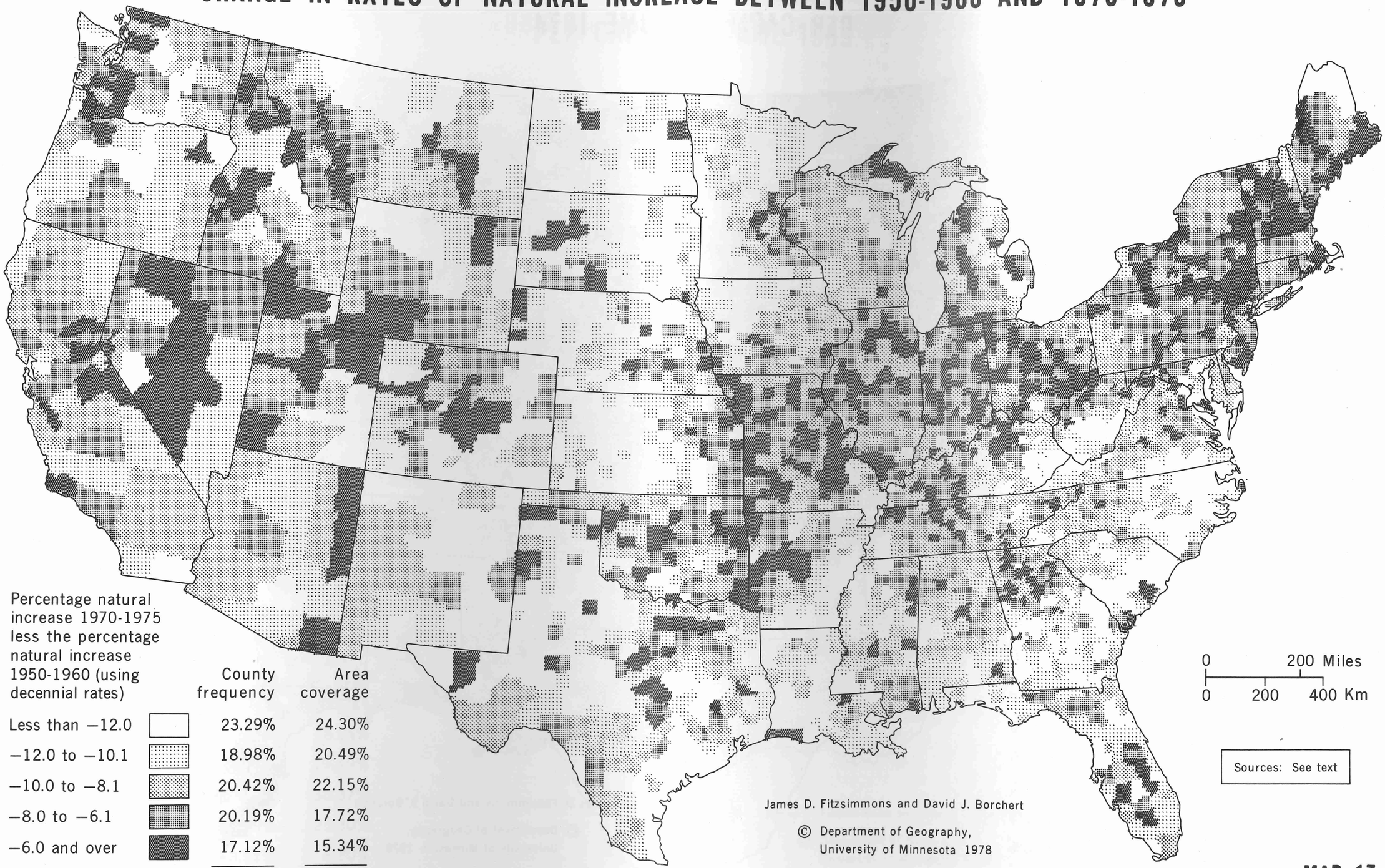
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 16

CHANGE IN RATES OF NATURAL INCREASE BETWEEN 1950-1960 AND 1970-1975



Percentage natural increase 1970-1975 less the percentage natural increase 1950-1960 (using decennial rates)	County frequency	Area coverage
Less than −12.0	23.29%	24.30%
−12.0 to −10.1	18.98%	20.49%
−10.0 to −8.1	20.42%	22.15%
−8.0 to −6.1	20.19%	17.72%
−6.0 and over	17.12%	15.34%
	100.00%	100.00%

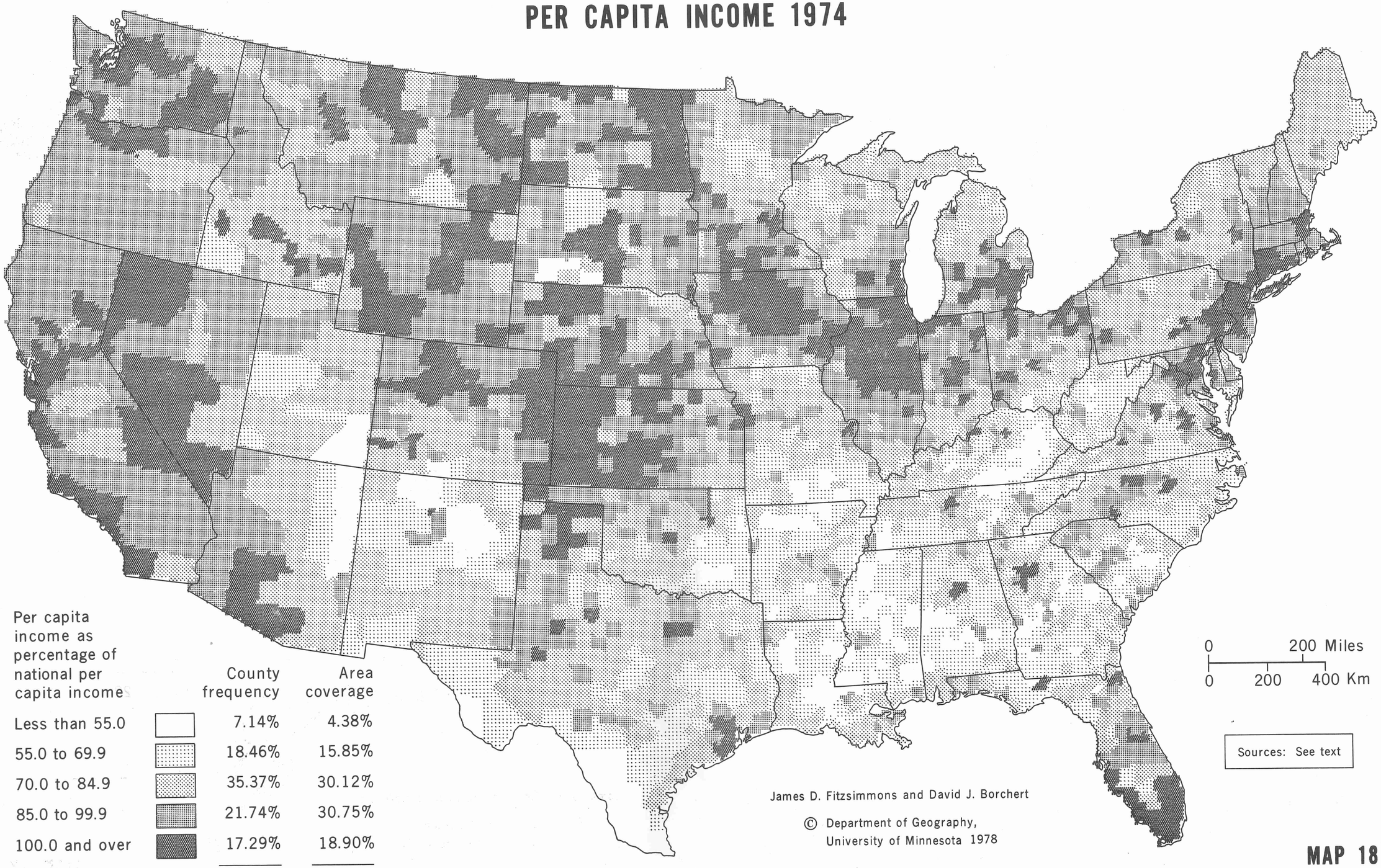
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 17

PER CAPITA INCOME 1974



Per capita income as percentage of national per capita income	County frequency	Area coverage
Less than 55.0	7.14%	4.38%
55.0 to 69.9	18.46%	15.85%
70.0 to 84.9	35.37%	30.12%
85.0 to 99.9	21.74%	30.75%
100.0 and over	17.29%	18.90%
	100.00%	100.00%

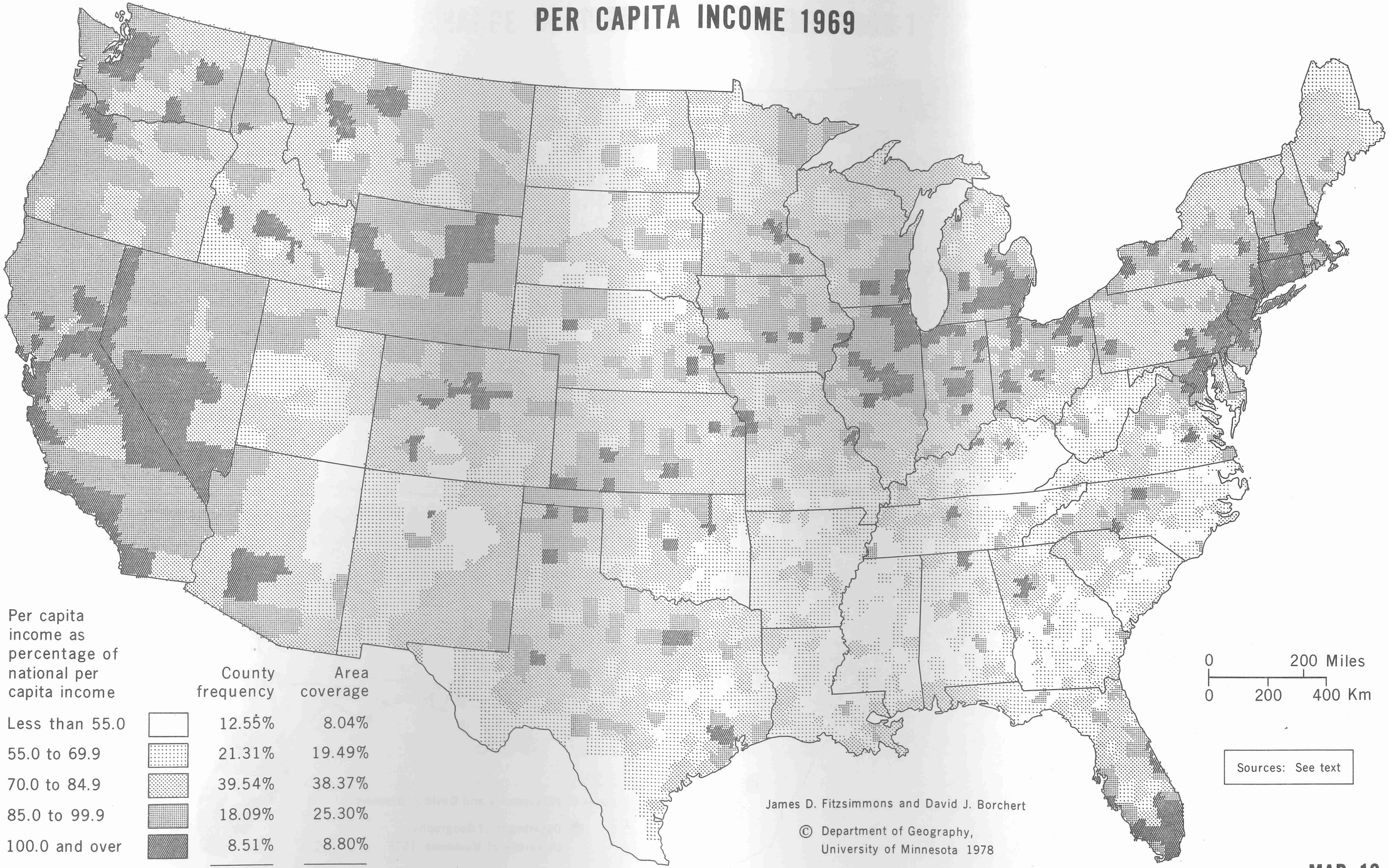
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 18

PER CAPITA INCOME 1969



Per capita income as percentage of national per capita income	County frequency	Area coverage
Less than 55.0	12.55%	8.04%
55.0 to 69.9	21.31%	19.49%
70.0 to 84.9	39.54%	38.37%
85.0 to 99.9	18.09%	25.30%
100.0 and over	8.51%	8.80%
	100.00%	100.00%

0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 19

PER CAPITA INCOME 1959

Per capita income as percentage of national per capita income	County frequency	Area coverage
Less than 55.0	25.76%	15.02%
55.0 to 69.9	19.93%	19.37%
70.0 to 84.9	28.43%	26.48%
85.0 to 99.9	14.95%	22.59%
100.0 and over	10.93%	16.54%
	100.00%	100.00%

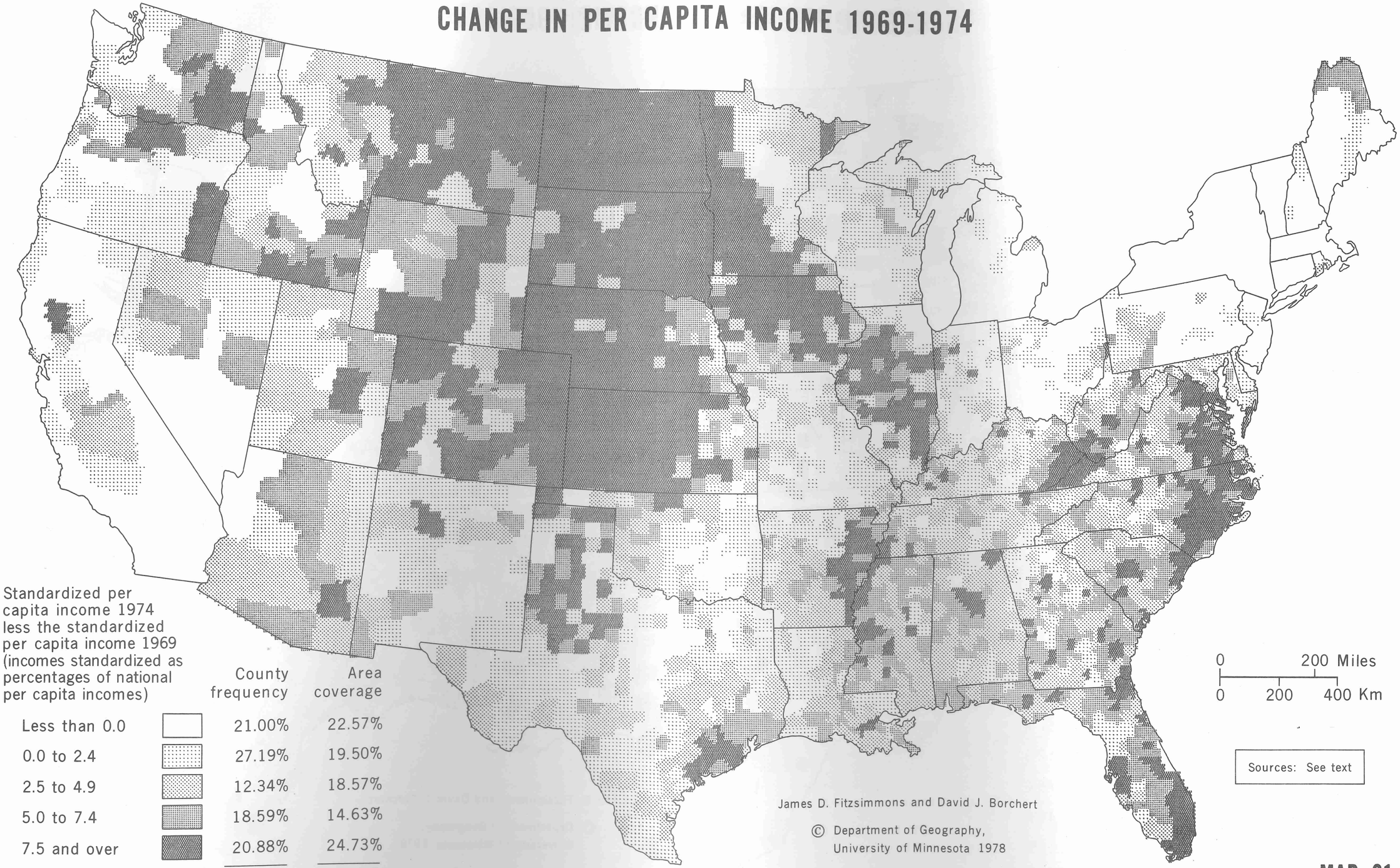
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 20

CHANGE IN PER CAPITA INCOME 1969-1974



Standardized per capita income 1974 less the standardized per capita income 1969 (incomes standardized as percentages of national per capita incomes)

	County frequency	Area coverage
Less than 0.0	21.00%	22.57%
0.0 to 2.4	27.19%	19.50%
2.5 to 4.9	12.34%	18.57%
5.0 to 7.4	18.59%	14.63%
7.5 and over	20.88%	24.73%
	100.00%	100.00%

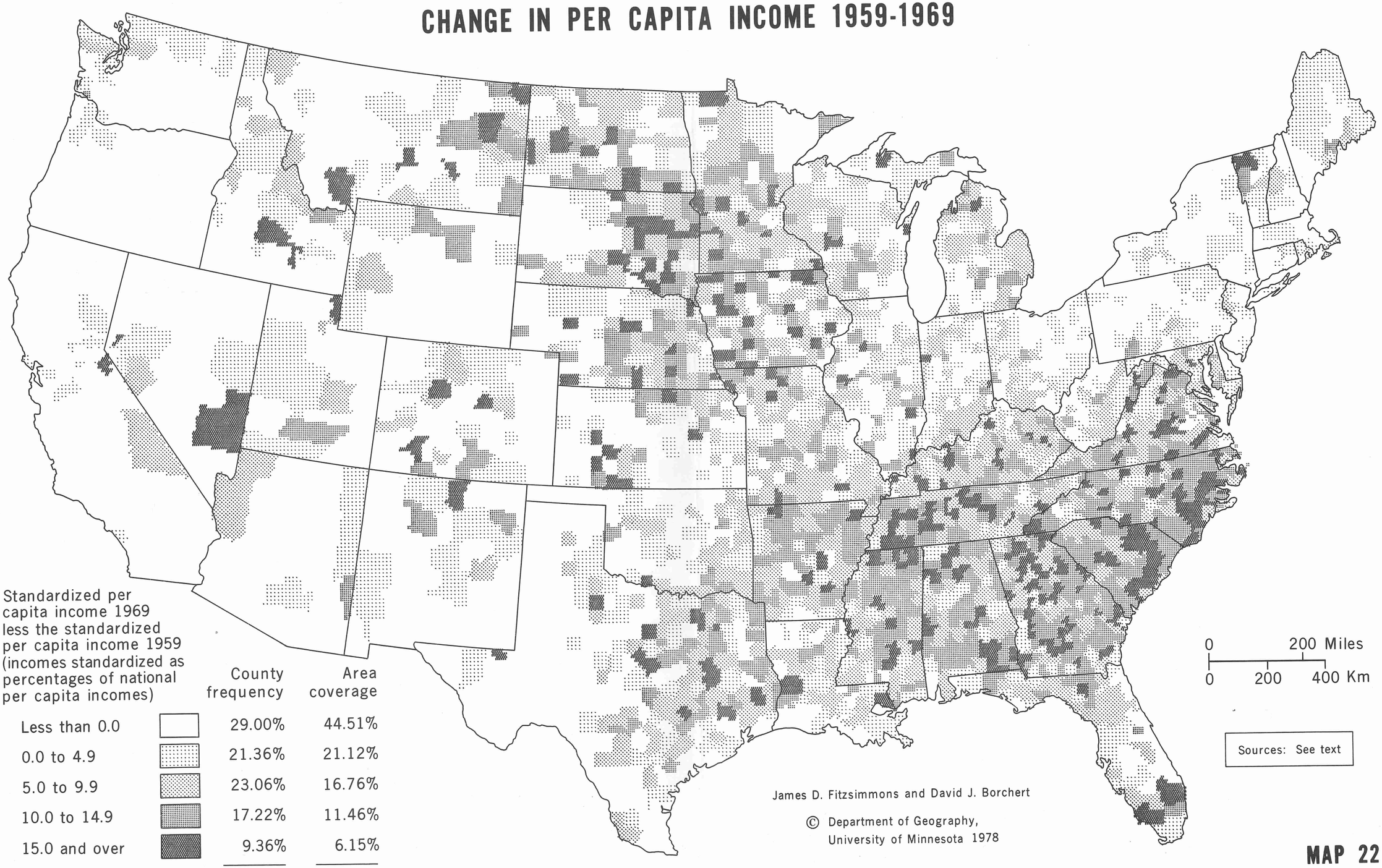
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 21

CHANGE IN PER CAPITA INCOME 1959-1969



Standardized per capita income 1969 less the standardized per capita income 1959 (incomes standardized as percentages of national per capita incomes)

	County frequency	Area coverage
Less than 0.0	29.00%	44.51%
0.0 to 4.9	21.36%	21.12%
5.0 to 9.9	23.06%	16.76%
10.0 to 14.9	17.22%	11.46%
15.0 and over	9.36%	6.15%
	100.00%	100.00%

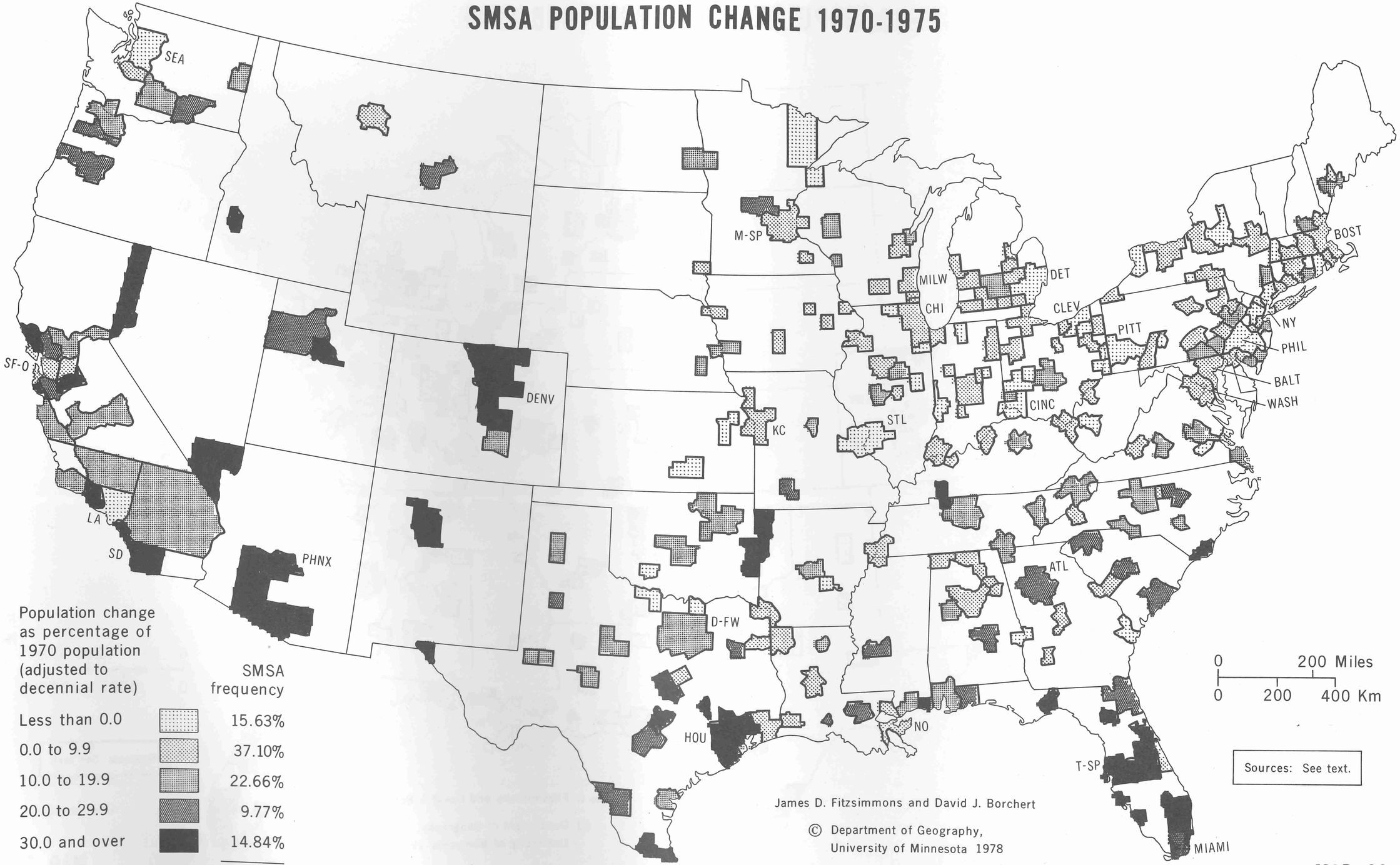
0 200 Miles
0 200 400 Km

Sources: See text

James D. Fitzsimmons and David J. Borchert

MAP 22

SMSA POPULATION CHANGE 1970-1975



Population change as percentage of 1970 population (adjusted to decennial rate)

	SMSA frequency
Less than 0.0	15.63%
0.0 to 9.9	37.10%
10.0 to 19.9	22.66%
20.0 to 29.9	9.77%
30.0 and over	14.84%
	100.00%

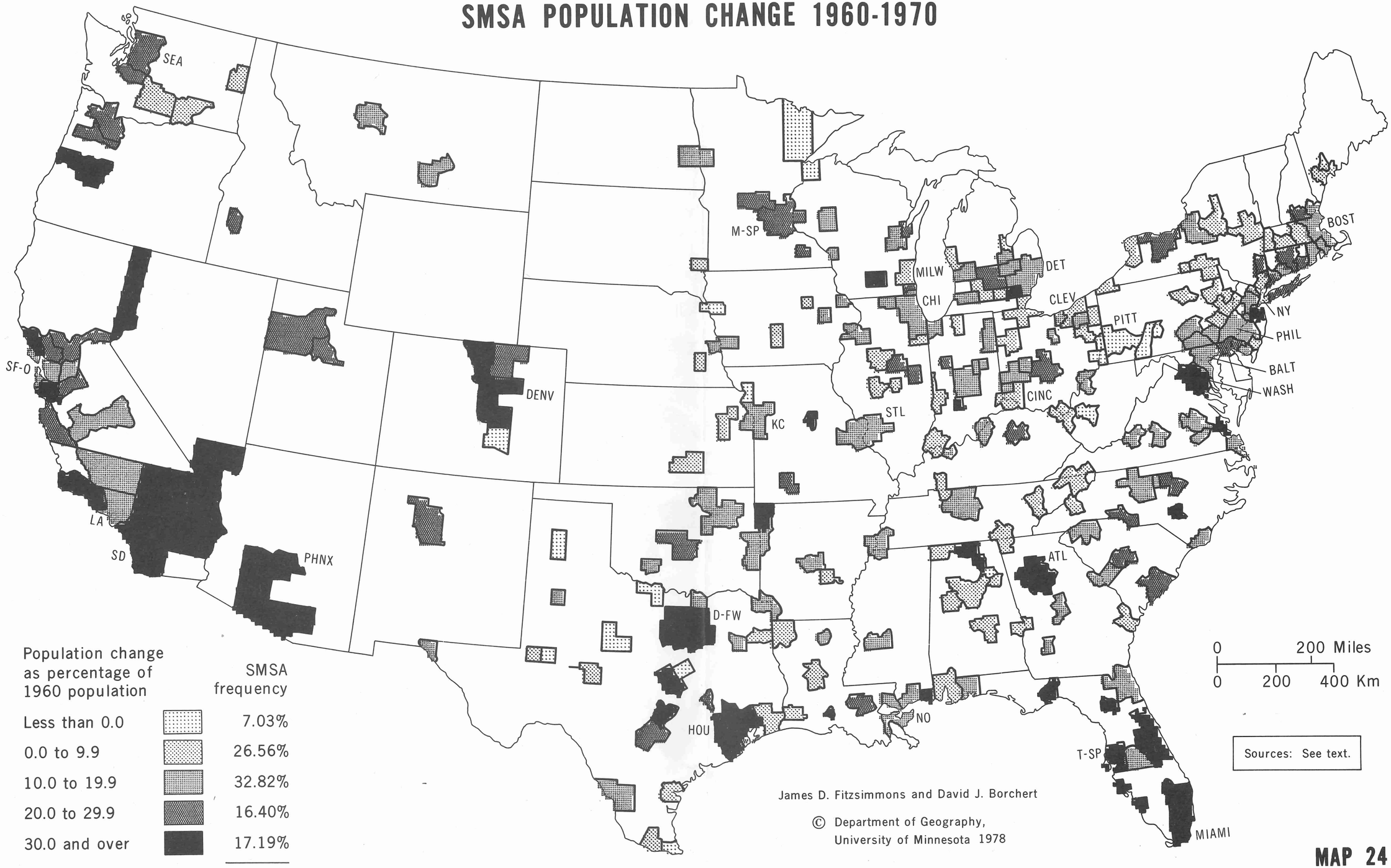
0 200 Miles
0 200 400 Km

Sources: See text.

James D. Fitzsimmons and David J. Borchert

MAP 23

SMSA POPULATION CHANGE 1960-1970



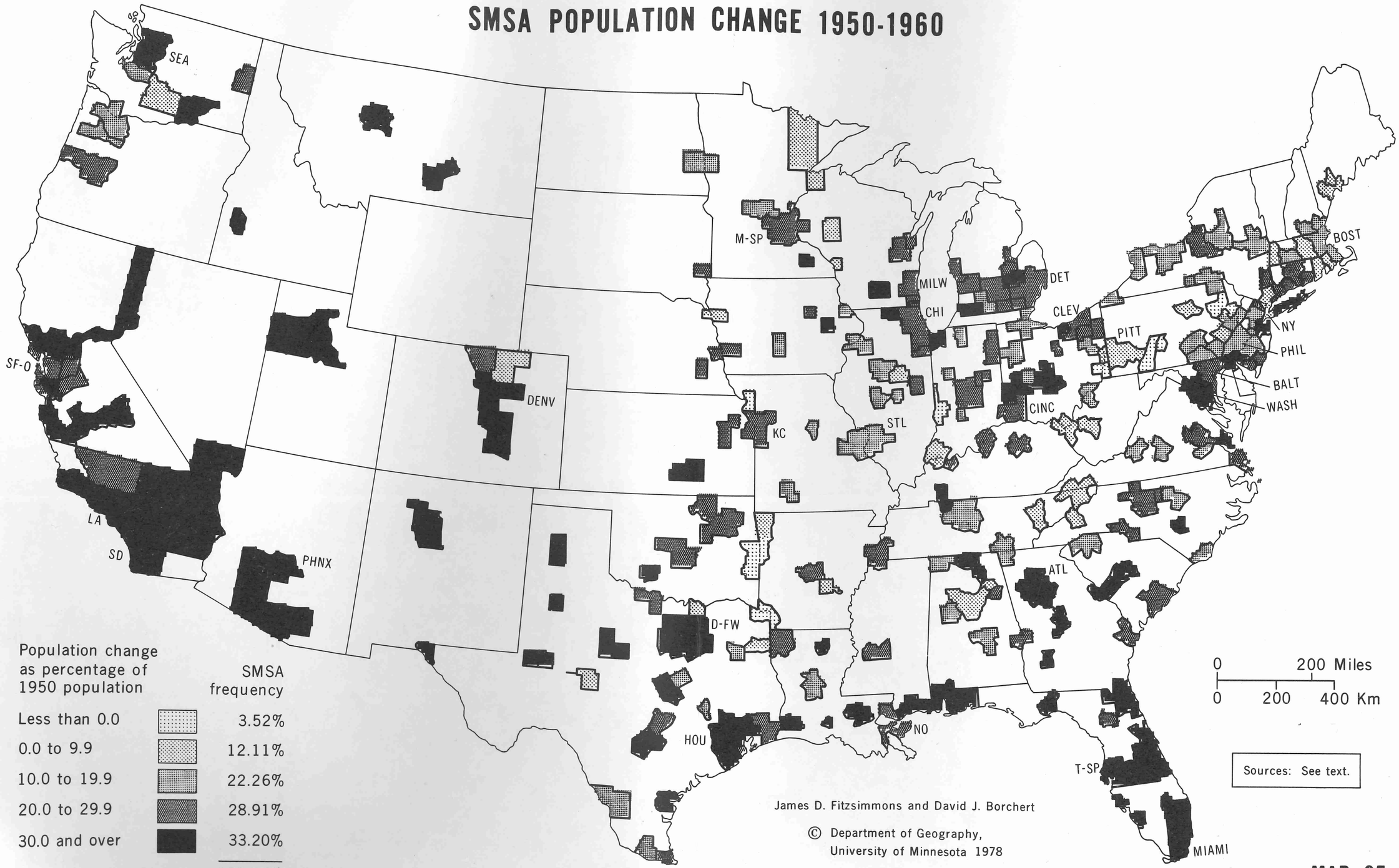
Population change as percentage of 1960 population	SMSA frequency
Less than 0.0	7.03%
0.0 to 9.9	26.56%
10.0 to 19.9	32.82%
20.0 to 29.9	16.40%
30.0 and over	17.19%
	100.00%

Sources: See text.

James D. Fitzsimmons and David J. Borchert

MAP 24

SMSA POPULATION CHANGE 1950-1960



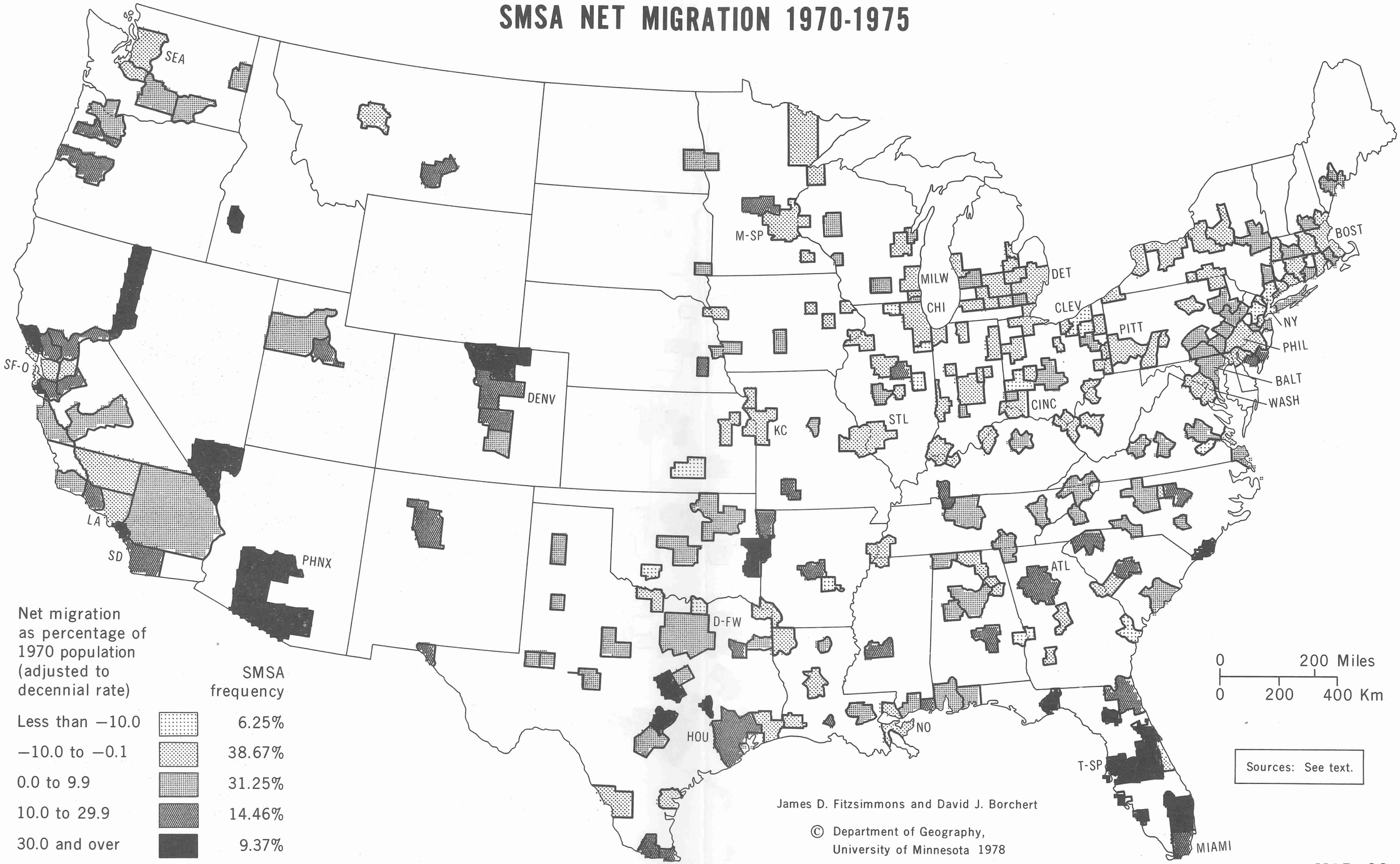
Population change as percentage of 1950 population	SMSA frequency
Less than 0.0	3.52%
0.0 to 9.9	12.11%
10.0 to 19.9	22.26%
20.0 to 29.9	28.91%
30.0 and over	33.20%
	100.00%

Sources: See text.

James D. Fitzsimmons and David J. Borchert

MAP 25

SMSA NET MIGRATION 1970-1975



Net migration as percentage of 1970 population (adjusted to decennial rate)

	SMSA frequency
Less than −10.0	6.25%
−10.0 to −0.1	38.67%
0.0 to 9.9	31.25%
10.0 to 29.9	14.46%
30.0 and over	9.37%
	100.00%

Sources: See text.

James D. Fitzsimmons and David J. Borchert

MAP 26

$2.50